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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on:

January 25, 2005, 21:14:59 ; Search time 170.563 Seconds (without alignments) 4233.600 Million cell updates/sec

Title:
Perfect score:
Sequence:

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

1825181 seqs, 575374646 residues Searched:

1825181 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

UniProt 02:*
1: uniprot sprot:*
2: uniprot trembl:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	P04626 homo sapien	canis	Q8k3f9 rattus norv	Q6p732 rattus norv	Aah61863 rattus no	P06494 rattus norv	Q60553 mesocricetu	Q6zpe0 mus musculu	Bac98297 mus muscu	Q8c0e7 m mus muscu	Q80y89 mus musculu	Q9qx70 rattus norv		0	Q8mil8 sus scrofa	Q01279 mus musculu	Q9ep98 mus musculu	Q15303 homo sapien	Q6ua28 rattus norv	Aag77349 rattus no	Q6ua29 rattus norv	Aaq77348 rattus no	Q7szf7 brachydanio	Q62956 rattus norv	Q6vga3 brachydanio	Aag91602 brachydan	O6xjv8 xiphophorus	Aap55673 xiphophor	Q9yh40 xiphophorus		
ΙD	ERB2 HUMAN	018735	Q8K3F9	Q6P732	AAH61863	ERB2 RAT	ERB2_MESAU	Q6ZPE0	BAC98297	Q8C0E7	Q80Y89	090X70	EGFR HUMAN	AAS83109	Q8MIL8	EGFR_MOUSE	Q9EP98	ERB4 HUMAN	Q6UA28	AAQ77349	Q6UA29	AAQ77348	Q7SZF7	ERB4 RAT	Q6VQA3	AAQ91602	Q6XJV8	AAP55673	Q9YH40	Q9W6F6	XMRK_XIPMA
DB	-	~	N	~	~	Н	Н	~	~	7	~	N	7	N	~	П	N	-	7	7	~	N	7	-	~	7	~	N	~	N	7
\$ Query Match Length DB	1255	1259	1259	1259	1259	1257	1254	1305	1305	881	711	1209	1210	1210	1209	1210	1210	1308	1292	1292	1308	1308	1191	1308	1191	1191	1209	1209	1165	1137	1167
% Query Match	99.66	92.4	88.1	88.0	88.0	88.0	87.9	87.7	87.7	61.8	47.8	46.6	46.5	46.5	46.3	46.2	46.1	44.1	44.1	44.1	44.0	44.0	43.9	43.8	43.7	43.7	42.3	42.3	40.4	40.1	39.9
Score	9089	6295	5998.5	5994.5	5994.5	5994	5984.5	5973.5	5973.5	4207	3255.5	3171	3166	3166	3153.5	3145	3142	3003.5	3001	3001	2999	2999	2988.5		2979.5	2979.5	2879.5	2879.5	2751	2729.5	2717.5
Result No.	1	8	ю	4	S	9	7	ω	σ	10	11	12	13	14	.15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	30	31

P21860 homo sapien Q62799 rattus norv P7954 fugu rubrip Q8aw81 brachydanio Q7ppn5 anopheles g Q7ppn5 anopheles g Q5bih9 anopheles g Q6zmm4 homo sapien Badi8701 homo sapien Q6sai6 drosophila Q6sai6 drosophila	Aar85155 drosophil Aar85225 drosophil	N
ERB3_HUMAN ERB3_RAT P79754 QRAWB1 QRAWB1 Q7PHUG Q9ELH9 Q6ZMM4 BAD18701 QBMLW0 Q6SAIG	AAR85155 AAR85225	AAR85252
44000000000	01	N
1342 1339 1328 1360 1340 1429 1433 1377 1325	1325	1325
33 34 48 8 8 3 3 4 4 8 8 8 3 3 4 4 4 8 8 8 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	29.5	29.5
2440.5 2369.5 2326 2212.5 2063 2049.5 2025.5 2012.5 2009	2009	2009
8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4. 4. W 4.	45

ALIGNMENTS

22	SHITAL ERRO HUMAN STANDARD; PRT; 1255 AA. BO4676; 13-AUG-1987 (Rel. 05, Created) 13-AUG-1987 (Rel. 05, East sequence update) 14-CCT-2004 (Rel. 45, Last annotation update) 15-CCT-2004 (Rel. 45, Last annotation update) 16-CCT-2004 (Rel. 45, Last sequence update) 17-CCT-2004 (Rel. 45, Last sequence update) 18-CCT-2004 (Rel. 46, Last sequence update) 18-CCT-2004 (Rel. 47, Last sequence update) 18-CCT-2004 (Rel. 47, Rel. 48,	
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ATP (By similarity).

ATP (By similarity).

By similarity.

By similarity.
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                             Cytoplasmic (Potential)
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I -> V (in allele E
/FTId=VAR_004077.
I -> V (in allele E
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/FTId=VAR_016318
                                                   Protein kinase
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EMBL; M1167; AAA35808.1; -.

EMBL; M11767; AAA35808.1; JOINED.

EMBL; M11767; AAA35808.1; JOINED.

EMBL; M11764; AAA35808.1; JOINED.

EMBL; M11765; AAA35808.1; JOINED.

EMBL; M11765; AAA35808.1; JOINED.

EMBL; M11705; AAA35808.1; JOINED.

EMBL; M11705; AAA35808.1; JOINED.

EMBL; M1170; AAA35808.1; JOINED.

EMBL; M1170; AAA35808.1; -.

EMBL; M1170; AAA35808.1; -.

EMBL; M20056; AAA35978.1; -.

EMBL; M20056; EMBL; M20050.1; -.

EMBL; M20050; EMBL; M20050; EMBL; M20050; EMBL; M20050; EMBL; M20050; M20050;
Genomics 15:426-429(1993).

-!- FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate.

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein tyrosine phosphate with each of the other ERBB receptors

-!- SUBUNIT: Heterodimer with PRKCABP (By similarity).

-!- SUBCELIULAR LOCATION: Type I membrane protein.

-!- PFM: Ligand-binding increases phosphorylation on tyrosine residues (By similarity).

-!- PCMX MARPHISM: There are fours alleles due to the variations in positions 654 and 655. Allele BI (Ile-654/Ile-655) has a frequency of 0.206; allele B3 (Val-654/Val-655) has a frequency of 0.206; allele B3 (Val-654/Val-655) has a frequency of 0.12.
                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Receptor protein-tyrosine kinase erbB-2.
Extracellular (Potential).
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R Pfam; PF01030; Recep_Ldomain; 2.

R PRINTS; PR00109; TYRKINASE.

R PKDDOm; PD000001; Prot_kinase; 1.

R SMART; SM00219; TYRK:

R SMART; SM00219; TYRK:

R SMART; SM0019; PROTEIN KINASE ATP; 1.

R PROSITE; PS00109; PROTEIN KINASE DOM; 1.

R PROSITE; PS00109; PROTEIN KINASE DOM; 1.

R PROSITE; PS00109; PROTEIN KINASE DOW; 1.

R PROSITE; PS00109; PROTEIN KINASE DOM; 1.

R PROSITE; PS00109; PROTEIN KINASE DOM; 1.

R PROSITE; PS00109; PROTEIN KINASE TYR; 1.

R PROSITE; PS00109; PROTEIN TYR; 1.

R PROSITE; PS00109; PROTEIN TYR; 1.

R PROSITE TYR; 1.

R PROS
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THE REAL BREAKE BREAKE BREAKE BREAKE BREAKE BREAKE BREAKE BREAKE COULUUUU BREAKE BREAK

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                               EEYLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG
                                               BEYLVPOOGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEERAPRSPEG
                                                                                      AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
                                                                                                                                                NOPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPBYLTPQ
                                                                                                                                                                                                                       GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
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ROS GO: 0016620; C: Rembrane; IEA.

ROS GO: 0016524; F:ATP binding; IEA.

ROS GO: 0016740; F:transferase activity; IEA.

RITEPROS IPRO0494; EGFR L.

RITEPROS IPRO0494; EGFR L.

RITEPROS IPRO0494; EGFR L.

RITEPROS IPRO0494; Furin-like.

RITEPROS IPRO0494; Rinase.

RITEPROS IPRO0494; RINASE RIP; I.

RAMART; SMO0261; FUS.

RAMART; SMO0261; FUS.

ROSITE; PRO0109; PROFEIN KINASE AFP; I.

ROSITE; PRO0109; PROFEIN KINASE AFP; I.

ROSITE; PRO0109; PROFEIN KINASE TYR; I.

ROSITE; PRO0109; PROFEIN KINASE TYR; I.

ROSITE; PRO0109; PROFEIN KINASE TYR; I.

ROSITE; PRO0109; ROFEIN KINASE TYR; I.

RAP-binding; Kinase; Transferase; Tyrosine-protein kinase.

SEQUENCE 1259 AA; 137989 MW; E37364D49C4ACD46 CRC64;
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Canis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yokota H.;
Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.
EMBL, AB0008451; BAA23127.1; --
HSSP; P04626; 1N8Z.
                                                                                                                                                                                                                                                                                                                                                                                            Canis familiaris (Dog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae,
NCBI_TaxID=9615,
                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation update)
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0
                                          Length 1255;
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                                            7
                                          DB
                                         Score 6806; D
Pred. No. 0;
1; Mismatches
                                         99.9%;
                                                                    Matches 1253; Conservative
                                                        Similarity
175
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1200 YLAPRGRAAPQPHPPPAFSPAFDNLYYWDQDPSERGSPPSTFEGTPTAENDEYLGLDVPV 1259
 1080 AGSDVFDGDLGMGAAKGLQSLPSQDPSPLQRYSEDPTVPLPPETDGKVAPLTCSPQPEYV 1139
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                                                   1140 NQPEVWPQPPLALEGPLPPSRPAGATLERPKTLSPKTLSPGKNGVVKDVFAFGSAVENPE
                                                                                          1196 YLTPQGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV
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Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            R GO; GO:0016620; C:membrane; IEA.

R GO; GO:0016620; C:membrane; IEA.

R GO; GO:0016620; F:ATP binding; IEA.

R GO; GO:0016740; P:transferase activity; IEA.

R GO; GO:0016740; P:transferase activity; IEA.

R GO; GO:0016740; P:transferase activity; IEA.

R GO; GO:0016740; P:transmembrane receptor protein tyrosine kin. . .; I INTERPO; IPR002014; BF-And.

R InterPro; IPR002014; BF-And.

R InterPro; IPR006211; Purin_-like.

R InterPro; IPR006212; Purin_-like.

R InterPro; IPR0019030; Grow_Fac_recept.

R InterPro; IPR001019; Prot Kinase.

R InterPro; IPR001245; Tyr_Dkinase.

R InterPro; IPR00190; Yr_Dkinase.

R InterPro; IPR00190; Yr_Dkinase.

R InterPro; IPR00190; Yr_Dkinase.

R InterPro; IPR00190; Yr_Dkinase.

R Pfam; PP00175; Furin_-like; 1.

R Pfam; PP00175; Furin_-like; 1.

R Pfam; PP00175; VIN; 2.

R Pfam; PP00175; Yunin_-like; 1.

R Pfam; PP00175; Yunin_-like; 1.
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Prodom; PR001001, Prot_kinase; 1.
Prodom; PR00101, Prot_kinase; 1.
SMART; SM00219; TYRK; 1.
PROSITE; PS001019; PE HAND; UNKNOWN 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Kinase; Transferase; Tyrosine-protein kinase.
SEQUENCE 1259 AA; 139101 MW; B724BD5CC33AE953 CRC64;
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                                                                                                                                                                                                                              01-071-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
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Matches 1104; Conservative
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Rattus norvegicus (Rat).
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SEQUENCE FROM N.A.
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01-OCT-2002
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                                             ELIYLPINASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG
                                                                                                                             LTLIDTNRFSACPPCSPACKDAHCWGASSGDCQSLTRTVCAGGCARCKGPQPTDCCHEQC
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MEDINES-2188257; PubMed-12477932;

MEDINES-2188257; Marger L., Sheafer C.F., Bhat N.K.,

MEDINES-2188257; Marusina K., Farmer A.A., Rubin G.M., Schuler G.D.,

MEDINES-2188257; Marusina K., Farmer A.A., Rubin G.M., Hong L.,

MEDINES-2188257; Marusina K., Farmer A.A., Rubin G.M., Marah E.,

MEDINES-2188257; Medina P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

MEDINES-2188257; Marin M., Madan M., Madan A., Gunaratne P.H.,

Medinage S.A., McEwan D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Miling M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

Miling M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

Medinger A.C., Grimwood J., Schmuz J., Myers R.M., Butterfield Y.S.,

Medinger A.C., Grimwood J., Schmuz J., Myers R.M., Schein J.E.,

Medinger A.C., Marra M.A.;

Mederation and initial analysis of more than 15,000 full-length human and mouse CDNA sequences T.
REGTASPPHPSPAFSPAFDNLYYWDQNSSEQGPPPSNFEGTPTAENPEYLGLDVPV 1259
                                                                                                                                                                                        Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausbergordate;

Strausbergordate;

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Richard (NOV-2003) to the EMBL/GenBank/DDBJ databases.

REMBL, BCO61863, AAM61863.1;

RINTERPRO; IPRO00494; EGFR L.

RINTERPRO; IPRO00494; EGFR L.

RINTERPRO; IPRO00211; Furin_like.

RINTERPRO; IPRO00210; GTOW_Fac_recept.

RINTERPRO; IPRO00130; GTOW_Fac_recept.

RINTERPRO; IPRO00130; GTOW_Fac_recept.

RINTERPRO; IPRO00130; GTOW_Fac_recept.

RINTERPRO; IPRO00130; STC_Lhr_Dkinase.

RINTERPRO; IPRO00245; TYT_Dkinase.

RINTERPRO; IPRO00149; YLP_MOSITE.

R Pfam; PPO0057; Furin-like; 1.

R Pfam; PPO0109; TYRKINASE.

R SMART; SM00220; STKC; 1.

R SMART; SM00220; STKC; 1.

R SMART; SM00220; STKC; 1.

R PROSITE; PSO0107; PROTEIN KINASE_TYR; 1.

R ATP-binding; Kinase; Transferase.

SEQUENCE 1259 AA; 139071 WW; 10746919C22BE802 CRC64;
                                                                                                          05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
65-JUL-2004 (TrEMBLrel. 27, Last annotation update)
V-erb-b2 erythroblastic leukemia viral oncogene homolog 2.
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                                                                                        PRELIMINARY;
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Q6P732;
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SEQUENCE FROM N.A.
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                  Length 1259;
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50; Mismatches 102;
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MEDINES-238825; PubMed=12477932; MEDINES-238825; PubMed E.A., Schaefer C.F., Bhat N.K., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Antachina K., Paramer A.A., Rubin G.M., Hong L., Antachina K., Paramer A.A., Rubin G.M., Hong L., Stapleton M., Scares M.B., Toshiyuki S., Carninci P., Prange C., Antachina M.J., Uddin T.B., Toshiyuki S., Carninci P., Prange C., Antachina M.J., McKernan K.J., Malek J.A., Gunaratine P.H., Raha S.S., Worley K.C., Hale S., Garcia A., Gaya L.J., Hulyk S.W., Rahans S., Wurley K.C., Hale S., Garcia A., Gaya L.J., Hulyk S.W., Rahand D. K., Muzny D.M., Sodergen E.J., Lu X., Gibbs R.A., Toldinan J.W., Sokorjene S., Sanchez A., Mitring M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G., Ra Blakesley R.W., Touchman J.W., Garen B.D., Dickson M.C., Rayines R.W., Butterfiteld Y.S., Karyinski M.I., Skalska U., Schmutz J., Myers R.M., Butterfiteld Y.S., Karyinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Schnerch A., Schein J., Marra M.A., Tonoga M.C., Smailus D.E., Schnerch A., Schein J., Marra M.A., Tonoga M.C., Smailus D.E., Schnerch A., Schein J., Marra M.A., Tonoga M.C., Smailus D.E., Schnerch A., Schein J., Marra M.A., Tonoga M.C., Smailus D.E., Schnerch A., Schein J., Marra M.A., Tonoga M.C., Shalski M. S., Schein J., Marra M.A., Tonoga M.C., Smailus D.E., Schnerch A., Schein J., Marra M.A., Tonoga M.C., Marra M.A., Tonoga M.C., Marra M.A., Tonoga M.C., Marra M.A., Tonoga M.C., Shalski W. W., Schein J., Schmutz J., Schnerch A., Schein J., Marra M.A., Tonoga M.C., Shalski W. W., Schein J., Schmutz J., Schnerch A., Schein J., Schmutz J., Schnerch A., Schein J., Schmutz J., Schmutz J., Schmutz J., Schmutz J., Schmutz 1139 1199 ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120 63 QCGAAPQPHPPPARSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255 1 MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL AEEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSBEBAPRSPLAPSB Gaps 1080 GAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEY Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus. NCBI_TaxID=10116; 1; Length 1259; AAH61863 PRELIMINARY; PRT; 1259 AA.
MAH61863. (TrEMBLrel. 27, Created)
02-MAR-2004 (TrEMBLrel. 27, Last sequence update)
02-MAR-2004 (TrEMBLrel. 27, Last annotation update)
V-erb-b2 erythroblastic leukemia viral oncogene homolog 2.
Rattus norvegicus (RRE). Query Match

88.0%; Score 5994.5; DB 2; Length

Best Local Similarity 87.8%; Pred. No. 2.2e-304;

Matches 1103; Conservative 50; Mismatches 102; Indels EMBL, BC061863; AAH61863.1; -. SEQUENCE 1259 AA; 139071 MW; 10746819C22BE802 CRC64; Strausberg R., Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases. Sci. U.S.A. 99:16899-16903(2002).

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   tyrosine phosphate.
SUBUNIT: Heterodimer with each of the other ERBB receptors. The constitutively activated oncogenic variant forms a homodimer.
Interacts with PRKCABP (By similarity).
SUBCELLULAR LOCATION: Type I membrane protein.
PTM: Ligand-binding increases phosphorylation on tyrosine residues
                                                                                                                                                                                                                                                                                                            TISSUE=Neuroblastoma;
MEDLINE=86118662; PubMed=3945311;
Bargmann C.I., Hung M.-C., Weinberg R.A.;
"The neu oncogene encodes an epidermal growth factor receptor-related
                                                                                                                   01-JÄN-1988 (Rel. 06, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor (EC 2.7.1.112)
(P185erbB2) (NEU proto-oncogene) (C-erbB-2) (Epidermal growth factor receptor-related protein).
Name=Erbb2; Synonyms=Neu;
                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lai C., Lemke G.;
"An extended family of protein-tyrosine kinase genes differentially expressed in the vertebrate nervous system.";
Neuron 6:691-704(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-92153181; PubMed-01346763;

Gullick W.J., Bottomley A.C., Lofts F.J., Doak D.G., Mulvey D., Newman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Newman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Newman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Noncogenic and oncogenic forms of the neu protein.";

EMBO J. 11:43-48(1992).

-I. FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin.

-I. CATALYTY ACTIVITY: ATP + a protein tyrosine = ADP + protein
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PIR; A24562; TVRTNU.
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InterPro; IPR000494; EGFR L.
InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin_repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 852-905 FROM N.A.
TISSUE-Sciatic nerve;
MEDLINE-91222560; PubMed=2025425;
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STRUCTURE BY NMR OF 650-668.
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PDB; 111J; NWR; A=647-681.
PDB; 1NBY; X-ray; C=23-631.
                                                                                                                                                                                                                                                                                                                                                                                        Nature 319:226-230(1986)
                                                                                                                                                                                                                           Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                      NCBI_TaxID=10116;
                                                                                           MIDSECRPRERELVSEFSRMARDPORFVVIONEDLGPASPLDSTFYRSLLEDDDMGDLVD 1019
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                                                         ALTLIDINRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQ
                                                                                                                                                                                                                                   NIQBFAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSL
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PQGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
                                                       TISSUE=Nerve;
MEDLINE=94193007; PubMed=7908275;
Nakamura T.; Ushijima T., Ishizaka Y., Nagao M., Arai M., Yamazaki Y.,
                                                                                                                                                                                                                                                                                                                                                                          "Cloning and activation of the Syrian hamster neu proto-oncogene.";
Gene 140:251-255(1994).
-!- FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin (By similarity).
-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Cricetinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SUBUNIT: Heterodimer with each of the other ERBB receptors (Potential). Interacts with PRKCABP (By similarity).
-!- SUBCELLULAR LOCATION: Type I membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- PTM: Ligand-binding increases phosphorylation on tyrosine residues.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- SIMILARITY: Belongs to the EGF receptor family.
                                                                                                                                                   15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 44, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor (p185erbB2) (NEU proto-oncogene) (C-erbB-2).
Name-ERBB2; Synonyms-NEU;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProDom; PD00001; Prot_kinase; 1.
SMART; SM00261; FU; 4.
SMART; SM0191; Tyrkc; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
                                                                                                                                                                                                                                   Mesocricetus auratus (Golden hamster).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR006212; Furin repeat.
InterPro; IPR009030; Grow Fac recept.
InterPro; IPR001009; Kinase-Irke.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR008266; Tyr_pkinase_AS.
InterPro; IPR004019; YLP_motif.
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ProDom; PD000001; Prot_kinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000494; EGFR L.
InterPro; IPR006211; Furin-like.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF01030; Recep_L_domain;
Pfam; PF02757; YLP; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pfam; PF00757; Furin-like; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; D16295; BAA03801.1; -. PIR; 148161; 148161.
HSSP; P06494; 1N8Y.
                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00069; Pkinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tyrosine phosphate.
                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                   NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                         Mesocricetus
                                                                                                                               ERB2 MESAU
                                      1199
                                                                                                  RESULT 7
FPR2 MESAU
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ELTYLPINASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LTLIDTNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQC
                                                                                                                         Receptor protein-tyrosine kinase erbB-2.
Extracellular (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Gaps
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ATP (By similarity).

By similarity).

By similarity.

By similarity.
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PROSITE; PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
ATP-binding; Disease mutaTion; GTycoprotein; Multigene family; Phosphorylation; Proto-oncogene; Receptor; Signal; Transferase; Transmembrane; Tyrosine-protein kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1254;
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-> E (in oncogenic NEU).
974C3791C21F2BE1 CRC64;
                                                                                                                                                      Cytoplasmic (Potential)
Cys-rich.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87.9%; Score 5984.5; DB 1.
87.6%; Pred. No. 7.3e-304;
iive 58; Mismatches 97;
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                                                                                                       Potential.
                                                                                                                                                                                                                       Cys-rich.
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1254 AA;
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SEQUENCE
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                                                                                                       SIGNAL
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CAAGCTGPKHSDCLACLHFNHSGICELHCPALITYNTDTFESMLNPEGRYTFGASCVTTC 349
                                                                                                                                                Charactarians, N. Kikuno R., Ohara R., Inamoto S., Koseki H., Hiraoka S., Saga Y., Nagase T., Ohara O., Koga H.;
Saga Y., Nagase T., Ohara O., Koga H.;

"Prediction of the coding sequences of mouse homologues of KIAA gene:
Till. the complete nucleotide sequences of 500 mouse KIAA-homologous
Trandomly sampled from size-fractionated libraries.";

CDNAs identified by screening of terminal sequences of cDNA clones
Trandomly sampled from size-fractionated libraries.";

DNA Res. 10:167-180(2003).

EMBL; AK129487; BAC98297.1; -.

RO; GO:0007422; P:neart development; IMP.

GO; GO:0007425; P:neart development; IMP.

GO; GO:0007425; P:peripheral nervous system development; IMP.

RO; GO:0007425; P:peripheral nervous system development; IMP.

InterPro; IPR006211; Furin repeat.

InterPro; IPR006212; Furin repeat.

InterPro; IPR001009; Kinase Ike.

InterPro; IPR001009; Kinase Ike.

InterPro; IPR001109; Kinase Ikanse.

InterPro; IPR001245; Tyr_pkinase.

InterPro; IPR001245; Tyr_pkinase.
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                                           Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1305;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   87.7%; Score 5973.5; DB 2;
87.5%; Pred. No. 2.9e-303;
ive 56; Mismatches 100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00757; Furin-like; 1.
Pfam; PF00069; Pkinase; 1.
Pfam; PF010130; Recep L domain; 2.
Pfam; PF010130; Recep L domain; 2.
Pfam; PF001030; Pface L domain; 2.
PRINTS; PR00109; TYRKINASE.
ProDom; PD000001; Prot kinase; 1.
SWART; SW00261; PU; 4.
SWART; SW00219; TYRC; 1.
PR051TE; PS00101; PROTEIN KINASE ATP; 1.
PR051TE; PS00101; PROTEIN KINASE DOM; 1.
PROSITE; PS00101; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
                             Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
protein (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 1099; Conservative
                                                                                                       SEQUENCE FROM N.A.
TISSUE=Embryonic tail;
PubMed=14621295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE 1305 AA;
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                                                                            NCBI_TaxID=10090;
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              YNYLSTDVGSCTLVCPLHNQEVŤAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
                              VEECRVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARC
                                                                                                                                                                                                                                                                                                                                             PSGVKPDLSYMPIWKYPDEEGMCQPCPINCTHSCVDLDERGCPAEQRASPATSIIATVVG
                                                                                                                                                                                                                                                                                                                                                                                                       RKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGLGSP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFT
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                                                                        IQEPAGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLP
                                                                                                                                      DISVEONLOVIRGRILHNGAYSLTLOGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTV
                                                                                                                                                      VKECRVWKGLPREYVNGKHCLPCHPECQPQNSTETCTGSEADQCTACPHYKDSPFCVARC
                                                                                                                                                                                                                                                                                                                           PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVG
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                                                                                                                                                                                                   PWDQLPRNPHQALLHTANR PEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQEC
                                                                                                                                                                                                                                                                                                                                                                                         ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL
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Last sequence update)
Last annotation update)
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Q6ZPE0;
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                                               TISSUE-Embryonic tail;
Okazaki N., Kikuno R., Ohara R., Inamoto S., Koseki H., Hiraoka S.,
Okazaki N., Kikuno R., Ohara R., Inamoto S., Koseki H., Hiraoka S.,
Saga Y., Nagase T., Ohara O., Koga H.;
Prediction of the Coding Sequences of Mouse Homologues of KIAA-homologous
III. The Complete Nucleotide Sequences of 500 Mouse KIAA-homologous
III. The Complete Nucleotide Sequences of compact of the Complete Nucleotide Sequences of compact Convas Identified by Screening of Terminal Sequences of conva Clones
Randomly Sampled from Size-fractionated Libraries.",
DNA Res. 10:167-180(2003).
BENBL; AKI29487; BAC98297.1; -.
   Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                     100; Indels
                                                                                                                                              1305 AA; 143507 MW; A51D897408521860
                                                                                                                                                                 87.7%; Score 5973.5; DB 2
87.5%; Pred. No. 2.9e-303;
                                                                                                                                                                                    Mismatches
                                                                                                                                                                                    26;
   Chordata; C
Rodentia; S
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Best Local Similarity 87.54
Matches 1099; Conservative
   Eukaryota; Metazoa;
Mammalia; Butheria;
NCBI_TaxID=10090;
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SEQUENCE FROM N.A.
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BAC98297;
02-MAR-2004 (TrEMBLrel. 27, Created)
02-MAR-2004 (TrEMBLrel. 27, Last sequence update)
02-MAR-2004 (TrEMBLrel. 27, Last annotation update)
MKIAA3023 protein (Fragment).
MKIAA3023 MAG (Mouse).
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Shibata K., Itoh

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SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

RATAM-CSTBL/60; TISSUB=Testis;
Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
Adachi J., Aizawa K., Hanagaki T., Hara A., Hashizume W.,
A Hayashida K., Hayatsu N., Hiramoto K., Hiracka T., Hirozane T.,
A Hayashida K., Hayatsu N., Hiramoto K., Hiracka T.,
A Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
A Ratch H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
A Karihara C., Mateuyama T., Miyazaki A., Murata M., Nakamura M.,
A Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
A Salto R., Saltoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
A Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
A Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
B Submitted (UUL-2001) to the EMBL/GenBank/DDBJ databases.

B MGD; MOISSI BACZ7442.1;
B MGD; MOISSIO, ELBDZ.
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SIGNER-E-SOSSOBL'6J; TISSUE-Testis;
STRAIN-E-SOSSOBL'5 PLUMOG=110'6861;
MEDLINE-SOSSOBL'13 PLUMOG=110'6861;
Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
Sonno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
Yamameto R., Matsumnor H., Sakaguchi S., Ikegami T., Kashiwagi K.,
Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watchiki M.,
Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
RIKEN integrated sequence analysis (RISA) system 384-format
Genome Res. 10:1757-1771(2000).
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MGD; MGI:95410; Exbb2.

AGO; GO:0007507; P:heart development; IMP.

AGO; GO:000422; P:myelination; IMP.

AGO; GO:000422; P:myelination; IMP.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000310; GTow_Eac_recept.

R InterPro; IPR001030; GTow_Eac_recept.

R InterPro; IPR001045; Try_Dkinase.

R InterPro; IPR001245; Try_Dkinase.

R InterPro; IPR001245; Try_Dkinase_AS.

R InterPro; IPR001256; Try_Dkinase_AS.

R InterPro; IPR001095; Minase; I.

R Pfam; PP01030; Recep_L. domain; 1.

R Pfam; PP01277; YLP; Z...
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             MEDLINE=20499374; PubMed=11042159; Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata Y., Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Promo H., Cap-trapper-selected prepare full-length cDNA libraries for rapid discovery Genome Res. 10:1617-1630(2000).
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llarity 88.1%; Pred. No. 2.8e-211;
Conservative 40; Mismatches 65;
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Prodom; Pro100; Prot_kinase; 1.
SMART; SM00219; Prot_kinase; 1.
SMART; SM00219; TyrKc; 1.
SMOSTITE; PS00117; PROTEIN KINASE ATP; 1.
PROSITE; PS00117; PROTEIN KINASE DOM; 1.
PROSITE; PS00119; PROTEIN KINASE DOM; 1.
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01-MAR-2004 (TrEMBLrel. 26, Last sequence update)
Mus musculus 13 days embryo male testis CDNA, RIKEN full-length
enriched library, clone:6030449F08 product:v-erb-b2 erythroblastic
leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene
homolog (avian), full insert sequence. (Fragment).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QGGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
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                                                                                                                                        THOSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPOPPICTIDVYMIMVKCW
PYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDV
                              PYVSRLLGICLTSTVQLVTQLMPYGCLLDHVREHRGRLGSQDLLNWCVQIAKGMSYLEEV
                                                                                                       RLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKMMALESILRRRF
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
NCBI_TaxID=10090;
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STRAIN=C57BL/6J; TISSUE=Testis;
MEDLINE=99279253; PubMed=10349636;
MEDLINE=PROPERTION: P. Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
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MEDLINE-21085660; PubMed=11217851;
RIKEN FANTOM Consortium;
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STRAIN=CS7BL/6J; TISSUE=Testis;
The FANTOM Consortium,
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Nature 420:563-573(2002).
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Altausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
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Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Heishe F.,
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Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carrinci P., Frange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McKernan K.J., Malak J.A., Gunzarne P.H.,
Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Glbbs R.A.,
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Whiting M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Nortswinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
Jones S.J., Marra M.A.,
T. "Generation and initial analysis of more than 15,000 full-length human
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R MGD; MGI:054000 Exbb.

R GO; GO:0004252; P:myelination; IMP.

R GO; GO:0007422; P:myelination; IMP.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000521; Furin-like.

R InterPro; IPR00521; Furin-like.

R InterPro; IPR00521; Furin-like.

R InterPro; IPR00521; Furin-like.

R Pfam; PF00757; Furin-like; I.

R Pfam; PF01030; Recep_L.domain; 2.

R SMAAT; SM00261; FU, 4.

R SMAAT; SM00261; FU, 4.

R SEQUENCE 711 AA; 78707 MW; 682B188EB0E71318 CRC64;
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84.4%; Pred. No. 9.8e-162;
tive 41; Mismatches 67; Indels
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Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.
EMBL; BCO46811; AAH46811.1; -.
EMBL; BCO5379; AAH53078.1; -.
HSSP; P06494; 1N8Y.
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                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=C57BL/6; TISSUE=Brain;
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STRAIN=C57BL/6; TISSUE=Brain;
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                                                                  KPPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGIL
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Sciurognathi; Muridae; Murinae; Mus.
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Last annotation update)
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SEQUENCE FROM N.A.
STRAIN-C57BL/6; TISSUE=Brain;
MEDLINE-22388257; PubMed=12477932;
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Mammalia; Butheria; Rodentia;
MCBI_TaxID=10090;
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01-JUN-2003 (TrEMBLrel. 24,
01-JUN-2003 (TrEMBLrel. 24,
05-JUL-2004 (TrEMBLrel. 27,
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Name=Erbb2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122 PLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00190, ZYTOCHROME C; UNKNOWN 2.
PROSITE; PS00107; PROTEIN KINASE_ATP; 1.
PROSITE; PS50011; PROTEIN KINASE_TYR; 1.
PROSITE; PS00109; PROTEIN KINASE_TYR; 1.
ATP-binding; Kinase; Receptor; Transferase; Tyrosine-protein kinase.
SEQUENCE 1209 AA; 134890 MM; 96FEE7F6CC1B7773 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels 114;
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InterPro; IPR000494; EGFR L.
InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin repeat.
InterPro; IPR009030; Grow Fac_recept.
InterPro; IPR011009; Kinase like.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
InterPro; IPR001245; Tyr_pkinase.
Fam; PF00757; Furin-like; 1.
Pfam; PF00769; Pkinase; 1.
                                                                                                                                                                                                                                                                                                             Pfam, PF01030; Recep L domain; 2. PRINTS; PR00353; 4FE4SFRDOXIN. PRINTS; PR00109; TYRKINASE.
                                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD000001; Prot_kinase; 1.
SMART; SM00261; FU; 4.
SMART; SM00219; TyrKc; 1.
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tissue.";
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                                                                                                                                                           PDLSVFQNLQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "A truncated, secreted form of the epidermal growth factor receptor encoded by an alternatively spliced transcript in normal rat tissue. Mol. Cell. Biol. 10:2973-2982(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO; GO:0016020; C:membrane; IEA.
GO; GO:0005524; F:ATP binding; IEA.
GO; GO:0005489; F:electron transport
GO; GO:0005489; F:electron transport
GO; GO:0005006; F:eplectron ion binding; IEA.
GO; GO:0005006; F:receptor activity; IEA.
GO; GO:0004872; F:receptor activity; IEA.
GO; GO:0004818; P:receptor activity; IEA.
GO; GO:0006488; P:protein transport; IEA.
GO; GO:0007169; P:transmembrane receptor protein tyrosine kin.
InterPro; IPR001450; 4PG4S ferredoxin.
InterPro; IPR001451; Cytc_heme_BS.
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MEDLINE-90258888; PubMed=2342466;
Petch L.A., Harris J., Raymond V.W., Blasband A.J., Lee D.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=Fisher; TISSUE-Liver;
Guttridge K., Dawson T.L., Earp H.S.;
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
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01-MAY-2000 (TrEMBLrel. 13, Last
01-MAR-2004 (TrEMBLrel. 26, Last
Bpidermal growth factor receptor.
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PIR; A36325; A36325.
HSSP; Q9H2C9; 1M17.
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Submitted (NOV-1991) to
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MEDLINE=84219729; Pubbled=6128312;
Ullrich A., Coussens L., Hayflick J.S., Dull T.J., Gray A., Tam A.W.,
Lee J., Yarden Y., Libermann T.A., Schlessinger J., Downward J.,
Mayes E.L.V., Whitle N., Waterfield M.D., Seeburg P.H.;
"Human epidermal growth factor receptor cDNA sequence and aberrant expression of the amplified gene in A431 epidermoid carcinoma cells.";
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                                                               TELRKVKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGV
                                                                                                                               GSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLE
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=9606,
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Ilekis J.V., Stark B.C., Scoccia B.;
"Possible role of variant RNA transcripts in the regulation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1238 KGTPTAENPEYLGLDVP 1254
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SECUENCE FROM N.A. (ISOFORM 1), AND VARIANTS GLN-98; ARG-266; LYS-521; ILE-674; GLY-962 AND PRO-988.

Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.; WILES-SNPs, environmental genome project, NIERE ES15478, Department of Genome Sciences, Seatle, WA (URL: http://egp.gs.washington.edu)."; Submitted (APR-2004) to the EMBL/Genbank/DDBJ databases.
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MEDLINE=84196372; PubMed=6326261;
Lin C.R., Chen W.S., Kruiger W., Stolarsky L.S., Weber W., Evans R.M., Verma I.M., Gill G.N., Rosenfeld M.G.;
"Expression cloning of human BGF receptor complementary DNA: gene amplification and three related messenger RNA products in A431
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MEDLINE=21100872; PubMed=11161793; DOI=10.1006/geno.2000.6341;
Reiter J.L., Threadgill D.W., Eley G.D., Strunk K.E., Danielsen A.J.,
Schehl Sinclair C., Pearsall R.S., Green P.J., Yee D., Lampland A.L.,
Balasubramaniam S., Crossley T.D., Magnuson T.R., James C.D.,
Maihle N.J.;
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"A 1.8 Kb alternative transcript from the human epidermal growth
factor receptor gene encodes a truncated form of the receptor.";
Nucleic Acids Res. 24:4050-4056 (1996).
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MEDLINE=97256547; PubMed=9103388;
MEDLINE=97256547; PubMed=9103388;
MEDLINE=97256547; Miederberger C., Scoccia B.;
"Expression of a truncated epidermal growth factor receptor-like protein (TEGER) in ovarian cancer.";

Gynecol. Oncol. 65:36-41(1997).
epidermal growth factor receptor expression in human placenta."; Mol. Reprod. Dev. 41:149-156 (1995).
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MEDLINE=885046483; PubMed=6093788;
Simmen F.A., Gope M.L., Schulz T.Z., Wright D.A., Carpenter G.,
O'Malley B.W.;
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Reiter J.L., Threadgill D.W., Danielsen A.J., Schehl C.M.,
Lampland A.L., Balasubramaniam S., Crossley T.O., Magnuson T.R.
Maihle N.J.;
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MEDLINE=64245835; PubMed=6330563;
M.H., Ishli S., Clark A.J.L., Sullivan M., Wilson R.K., Roe B.A., Merlin G.T., Pastan I.;
"Human epidermal growth factor receptor cDNA is homologous variety of RNAs overproduced in A431 carcinoma cells.";
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Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                           TISSUE=Placenta;
MEDLINE=97078686; PubMed=8918811;
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Sato C., Kim J.-H., Abe Y., Satto K., Yokoyama S., Kohda D.;
"Characterization of the N-oligosaccharides attached to the atypical
ABn-X-Cys sequence of recombinant human epidermal growth factor
receptor.";
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J. Biol. Chem. 266:1746-1753(1991).
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            MEDLINE-88217333; PubMed-3329716;
Haley J.D., Whittle N., Bennett P., Kinchington D., Ullrich
Waterfield M.D.;
                                                        the 110 kb locus
                                                     "The human EGF receptor gene: structure of the 110 kb locus identification of sequences regulating its transcription."; Oncogene Res. 1:375-396(1987).
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                                                                                                                                                                                                                                                                                                                                                                    Submitted (SEP-1997) to Swiss-Prot.
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MEDLINE=84191554; Pubmed=6325948;
Medline=84191554; Pubmed=6325948;
Madia G., Cohen S.
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MEDLINE-85270438; PubMed-2991899;
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MEDLINE=91107677; PubMed=1988448;
Haley J.D., Waterfield M.D.;
 OF 1-29 FROM N.A.
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                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               308 VGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGC 367
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69 ASLSFLODIQEVQGYVLIAHNOVROVPLORLRIVRGTQLFEDNYALAVLDNGDPLNNTTP 128
                                                                         MEDLINE=98225196; PubMed=9556602; Abb Y., Odaka M., Inagaki F., Lax I., Schlessinger J., Kohda D.; "Disulfide bond structure of human epidermal growth factor receptor."; J. Biol. Chem. 273:11150-11157(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 LLAALCPASRALBEKKVCQGTSNKLTQLGTFEDHFLSLQRMFNNCEVVLGNLEITYVQRN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCA-RCKGPLPTDCCHEQCAAGCTGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    368 KKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQN
                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=95386455; PubMed=7657591; Galistero M.Y., Schlessinger J.; Galistero M.L., Dikker J., Batzer A.G., Langdon W.Y., Schlessinger J.; "Tyrosine phosphorylation of the c-cbl proto-oncogene protein product and association with epidermal growth factor (EGF) receptor upon EGF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=21153697; PubMed=11116146; DOI=10.1074/jbc.M008458200;
Habib A.A., Chatterjee S., Park S.-K., Ratan R.R., Lefebvre S.,
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Local Similarity 49.8%; Pred. No. 8.7e-157;
es 630; Conservative 177; Mismatches 352;
                           [21]
PARTIAL SEQUENCE, AND DISULFIDE BONDS.
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J. Biol. Chem. 270:20242-20245(1995)
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                                                                                                                                                                                                                                      MEDLINE=87297456; PubMed=3039909;
Biochem. 127:65-72(2000).
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Matches 630; Conservative 177; Mismatches 352; Indels 106; Gaps 21; QY 11 LLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTN 68	Qy 69 ASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTP 128	Qy 129 VTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNR 188	Qy 189 SRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCA-RCKGPLPTDCCHEQCAAGCTGP 247	QY 248 KHSDCLACLHFNHSGICELHCPALVIYNTDIFESMPNPEGRYTFGASCVTACPYNLSTD 307 :	QY 308 VGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQBFAGC 367	QY 368 KKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQN 427	QY 428 LQVIRGRILHNGAYSLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFR 487	QY 488 NPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVL 547	QY 548 QGLPREYVNARHCLPCHPECDPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPD 607 :	QY 608 LSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLV 664 ::: :	OY 725 VLGSGAFGTVYKGIMIPDGENVKIPVELLQERELVEPLTPSGAMPNQAQMRILKETELRKVK 724 :
Db 603 NNTL-VWRYADAGHVCHLCHPNCTYGCTGPGLEGCPTNGPKIPSIATGWVGALLLLLV 659 Qy 665 VVLGVVFGILIKRRQCKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVK 724	Qy 725 VLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSR 784	Qy 785 ILGICLTSTVQLVTQLMPVGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHR 844	QY 845 DLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSD 904	CY 905 VMSYGVTVWELMTFGAKPYDGIPAREIPDLIEKGERLPQEPICTIDVYMINVKCWMIDSE 964	OY 965 CRPRFRELVSEFSRWARDPORFVVIQ-NEDLGPASPLDSTFYRSLLEDDDWGDLVDAEEY 1023	QY 1024 LVPQQGFFCPDPAPGAGGWVHRRRSSSTRSGGGDLTLGLEPSEEBAPRSPLAPSEGAGS 1083	QY 1084 DVFDGDLGMGAAKGLQSLFTHDPSPLQRVSEDPTVPLPSETDGYVAPLTCSPQPEYVN 1141	QY 1142 QPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAPGGAVENPEYL-TPQ 1200	OY 1201 GGAAPQPHPPAFSPAFDNLYYWDQDP:PERGAPPSTFKGTPTAE 1244	Oy 1245 NDEYL 1249 	RESULT 14 AAS83109 DT 4AAR-2004 (TrEMBLrel. 27, Created) DT 14-ARP-2004 (TrEMBLrel. 27, Last annotation update) DT 14-ARP-2004 (TrEMBLrel. 27, Last annotation update) DT 14-ARP-2004 (TrEMBLrel. 27, Last annotation update) DE Epidermal growth factor receptor (Erythroblastic leukemia viral) DE Epidermal growth factor receptor (Erythroblastic leukemia viral) DE GV-erb-b) oncogene homolog, avian). CN EMARATOTA: Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; CN Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. CN MCBL Tax1D=9606; RN [1] RA Livingston R.J., Rieder M.J., Chung MW., Ritchie T.K., Olson A.N., RA Livingston R.J., Rieder M.J., Leithauser B.J., Nickerson D.A.; RA Livingston R.J., Rieder M.J., Leithauser B.J., Nickerson D.A.; RA Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.; R. Submitted (APR-2004) to the BNBL/GenBank/DDBJ databases. DR EMBL; AY588246; AAS83109.1; KW Receptor. SQ SEQUENCE 1210 AA; 134276 MM; DBAZASOB4EFBGEDZ CRC64; Query Match Best Local Similarity 49.8%; Pred. No. 8.7e-157;

424

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1023 YLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAG 1082
                                                                                                                                                                                                                                                                                                                                                          360 RNCTSISGDLHILPVAFRGDSFTRTPPLDPKELDILKTVKEITGFLLQAWPENRTGLHA 419
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                                                                                                                                                                                                                                                                       305 STDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEF 364
                                                                                   896 DVWSYGVTVWELMTFGSKPYDGIPASEISTVLEKGERLPQPPICTIDVYMIMVKCWMIDA
                                                                                                                                                      301 VIDHGSCVRACSSDSYEV-EEDGVRKCKKCKCOGPCGKVCNGIGIGEFKDTLSINATNIKHF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SE DSRPKFRELIIEFSKWARDPQRYLVIQGDERMHLPSPTDSNFYRALMDEEDMEDVVDADE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 PTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNN
                   TGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYL
                                                                                                                                                                                                                                                                                                                                         365 AGCKKIFGSLAFLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               545 RVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGV
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                                                                                                                                    TNRSRACHPCSPMCKGSRCWGESSEDCQSLTRTVCAGGCA-RCKGPLPTDCCHEQCAAGC
                                                                     TTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDI
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DVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSET--DGYVAPLTCSPQPEYVN
                   1201 GGAAPQPHPPPAFSPAFDNLYYWDQ-----DP----PERGAPPSTFKGTPTAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLALL-----PPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYOGCQVVQGNLELTYL
                                                                 OPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYL-TPO
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SWART; SM00219; TYRC; 1.
PROSITE; PS00199; CYTOCHROME C; UNKNOWN 1.
PROSITE; PS00109; PROTEIN KINASE APP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE DOM; 1.
SROSITE; PS00109; PROTEIN KINASE TY; 1.
ATP-binding; Kinase; PS00109; Transferase; Tyrosine-protein Kinase.
SEQUENCE 1209 AA; 133531 MM; 268E3FB11E36F90F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kim J. G., Vallet J.L., Nonneman D., Christenson R.K.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.

Rim J. G., Vallet J.L., Nonneman D., Christenson R.K.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.

RESP: Q9H2C9; LMJ.

RO; GO:0016020; C:membrane; IEA.

GO; GO:0005224; F:ATP binding; IEA.

GO; GO:000524; F:ATP binding; IEA.

GO; GO:000524; F:ATP binding; IEA.

GO; GO:000548; F:Pricansferase activity; IEA.

GO; GO:0004872; F:transferase activity; IEA.

GO; GO:000468; P:protein amino acid phosphorylation; IEA.

InterPro; IPR000494; EGREL.

RINTERPRO; IPR000494; EGREL.

RINTERPRO; IPR000919; Prot kinase.

RINTERPRO; IPR000896; Pyr_pkinase.

RINTERPRO; PR00109; Recep L. domain; 2.

RINTERPRO; PR00109; TYRKINASE.

RINTERPRO; PR00109; Prot kinase; 1.

REM; PR0000091; Prot kinase; 1.

REM; REM; PR00109; FVERINASE.

REMART; SMO0106; FIR. F.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              107;
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                                                                                                                                                                                                                                                                                                                                                     01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OT-2004 (TrEMBLrel. 26, Last annotation update)
Epidermal growth factor receptor.
Sus scrofa (Pig).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ilarity 49.8%; Pred. No. 3.9e-156;
Conservative 178; Mismatches 350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.3%; Score 3153.5;
49.8%; Pred. No. 3.9e-
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                                                                                                                                                                                                                                                                                                                         PRT; 1209
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                                                                                                                                                                                                      NPEYL 1249
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                               1043
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Best Local S
Matches 631
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775 843 835 963

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663 959

544

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        Qy
        1141 NQPDVRPQPPSREGPLPAARPAGATLERAKTLSPGKNGVVKDVPAFGGAVENPEYL-TP 1199

        Db
        1093 NQ-SVPKRPAGSVQNPVYHNQPLSA------APGRDPHYQN--SHSNAVGNPEXLNTP 1141

        Qy
        1200 QGGAAPQPHPPPAFSPAFDNLYYWDQ------DP------PERGAPPSTFKGTPTA 1243

        Db
        1142 R-------PACINGGLDGPAFWAQTGSHQINLDNFDYQQAFFFKEAKSNGICKG-PAA 1191

        Qy
        1244 ENPEYL 1249

        Db
        1192 ENAEYL 1197

        Search completed: January 25, 2005, 21:29:14

        Job time: 184:563 Becs
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Her sof bre Her

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Her2/Neu
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Human HER
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Human bre
Human HER
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Rat Her-2
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                 Abr82066 Adc09593 Adc09593 Adc62548 Adc62548 Adc64554 Adc645554 Adc10083 Adc17193 Ad
                                                                                                                                                                                                                                                                             Abr82067 | Ade63279 |
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/label= insertion region
/note= "suitable for foreign epitope insertion"
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/label= Ligand_binding_domain
325. .339
/label= insertion region
/note= "guitable For foreign epitope insertion"
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/label= insertion_region
/note= "suitable For foreign epitope insertion"
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/label= insertion region
/note= "suitable for foreign epitope insertion"
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/label= insertion region
/note= "suitable for foreign epitope insertion"
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                                               ADD25484
ADE63281
ADE76190
ADF45048
ADF45048
ADF6554
ADC35106
ADC35106
ADC35106
ADC36813
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AAU98923
AAB21208
AAB21199
AAM51144
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/label= N-terminal
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 Homo sapiens
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AAY92620;
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Domain
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 Aay92620 Human her
Aab60167 HER2 tran
Aae12130 Human tyr
Aae26349 Human HER
Aae26366 Human HER
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Human Her
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                         1 MELAALCRWGLLLALLPPGA.....TFKGTPTAENPEYLGLDVPV 1255
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Aau 4495
Abu 4495
Abu 44708
Abu 44708
Ada 31282
Ada 31282
Adb 57281
Adb 57281
Adb 57281
Adb 57281
Adb 5781
               GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                           2002273 segs, 358729299 residues
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                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                              protein search, using sw model
                                                                                                             January 25, 2005, 21:08:29
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ADM72831
ADO20009
AAW01111
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AAB60167
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AAE26349
AAE26366
AAU74545
ABR47447
ABP74708
AAE38390
AAE38390
ADA38143
ADA37255
ADB67621
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AAU77114
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AAE24067
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Gapop 10.0 , Gapext 0.5
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11: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
5: geneseqp2001s:*
5: geneseqp2003as:*
7: geneseqp2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            geneseqp2004s:*
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seq length: 200000000
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Perfect score:
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Maximum DB E
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Sequence 1255 AA;

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This is the human heregulin 2 (Her2) sequence. Immunogenic analogues of Her2 can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. Regions suitable for the insertion of foreign T helper epitopes were identified (see features table). The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor NB (FGPB). The method comprises effecting simultaneous presentation by artigen producing cells (APCS) of the animals immune system of: (1) at least 1 Breal group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 Breal group derived from the Da animal. Analogues of human PSM, human Her2 and human murine FGPBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at cleast one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGPBb and Her2, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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/label= insertion region
/note= "guitable For foreign epitope insertion"
(595. .0)
/label= insertion region
/note= "guitable For foreign epitope insertion"
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/note= "suitable For foreign epitope insertion"
165. .479
/label= insertion region
/note= "suitable for foreign epitope insertion"
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|Jabel= insertion region
|note= "suitable for foreign epitope insertion"
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1abel= insertion region
Ynote= "suitable for foreign epitope insertion"
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note= "suitable For foreign epitope insertion"
555. 1010
Tabel= Tyrosine_kinase_domain
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                                                                                                                                                                                                                                                                     Transmembrane_domain
                                                                                                                      'label= Cysteine_rich_domain
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/label= C-terminal_domain
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/label= Tr
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20-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVG
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                                                             241 AAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACP
                                                                                                                                                                                                                                                                                              YNYLSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSAN
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                                               1 MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
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ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG
            ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG
                                              DPLNNTTPVTGASPGGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treating tumors, particularly breast cancers, which overexpress an ErbB receptor and does not respond to an anti-ErbB antibody, comprises conjugating the antibody to a maytansinoid.
                                                                           AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPGFTVAPLTCSPQPEYV
                                                                                                                 NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ
                                                       AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
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                                                                                                                                                                                                                                                                                                                                Human; HER2; BrbB2 receptor; p185neu; maytansinoid conjugate; cancer;
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ilarity 100.0%; Pred. No. 0;
Conservative 0; Mismatches
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16-MAR-2000; 2000US-0189844P
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N-PSDB; AAF24297.
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The invention relates to synthetic therapeutic compounds (antigenic peptides) with enhanced binding to major histocompatibility complex (MHC) molecules and enhanced immunoregulatory properties relative to their natural counterparts. Compounds of the invention are useful for inducing an immune response in a subject and for use in adoptive immunotherapy. They are useful as components of anti-cancer vaccines and to expand immune effector cells that are specific for cancers characterised by expression of the breast cancer antigen, HER-2. Polynucleotides that canced peptides of the invention are useful as hybridisation probes and as primers for the detection of genes of gene transcripts that are expressed in antigen presenting cells (APCs), to confirm transduction of polynucleotides into host cells. The present sequence is human tyrosine kinase-type receptor, HER-2. Compounds of the invention are designed based on the HER-2 antigenic peptide (774-782)
for
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histocompatibility molecules and enhanced immunoregulatory properties
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                                                                          GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       netive human HER2 protein in its mammary gland cells, useful as tumor models for testing HER2-directed cancer therapies, and for identifying anticancer agents.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inducing or enhancing an immune response against an antigen, particularly cytotoxic T-lymphocyte responses, for treating or ameliorating prostate or breast cancer, comprises administering the antigen formulated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        response against a polypeptide antigen in an animal, including human. The method comprises administering the polypeptide antigen or at least one wariant which includes at least one first T-helper cell epitope that is foreign to the animal (foreign TH epitope) and is formulated with chitosan. The polypeptide antigen is weakly immunogenic or nonimmunogenic. The invention is used as vaccine. The chitosan and polypeptide antigen for inducing or enhancing an immune response, particularly CTL response, against the polypeptide or inducing or enhancing an immune response. The method for inducing or enhancing an immune response is useful in the method for inducing or enhancing an immune response is useful in the article or protein antigen. The method for inducing or enhancing an immune response is useful in the article or ameliorating cancer, e.g. prostate or breast cancer. The
                                                                                                                                                                             Human; immune response; T-helper cell epitope; chitosan; CTL response; vaccine; prostate cancer; breast cancer; Her2 antigen; cytostatic; immunostimulant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               invention relates to a method for inducing or enhancing an immune
           'note= "Mature human Her2 antigen"
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ilarity 100.0%; Pred. No. 0;
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03-NOV-2000; 2000US-0245166P.
18-JUN-2001; 2001DK-0000936.
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           NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200
                                                                                                                                                                                                                                       Human; HER2; ErbB; epidermal growth factor receptor; receptor; anti-ErbB antibody-maytansinoid conjugate; cancer; tumour; breast; ovary; stomach; endometritum; salivary gland; lung; kidney; colon; colorectum; thyroid; pancreas; prostate; bladder; ErbE2; neuronal disorder; glial disorder; astrocytal disorder; hypothalamic disorder; glandular disorder; anticophagal disorder; epithalial disorder; stromal disorder; blastocoelic disorder; inflammatory disorder; angiogenic disorder; inmunological disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Treating tumor characterized by overexpression of epidermal growth factor receptor, ErbB or cancer in mammal, comprises administering anti-ErbB antibody-maytansinoid conjugate to the mammal.
                         1141 NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENDEYLTPQ
                                                        GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
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                                                                                                                                            AAU74545 standard; protein; 1255
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05-OCT-2000; 2000US-0238327P.
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SLIWKOWSKI M.
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                                          AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
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1g Y, Xu Y, Zhao X, Meyer
Meric F, Sahin A, Mills
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                                                                                                                                                                                                                                                                                                               cancer; cytostatic; gene therapy.
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L, Meric F
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Monahan JE, Myer V, Wan
Hortobagyi GN, Pusztai L,
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2001US-0301572P.
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2002US-0362585P.
2002US-0380391P.
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Bast RC, Ho
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                                                                                                                         MELAALCRWGLLLALLPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNL
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                                                                                                                                                                                                                                                                              man; epitope; vaccine; immunotherapeutic; cytostatic; immunogenicity;
cell; chromosome 17q21-q22.
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                                                                                                                              Novel epitopes useful as vaccines, comprises peptides or nucleic acid encoding the peptides, that are useful epitopes of target-associated antigens.
                                 AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention relates to a novel medical method comprising providing an implantable microscopic device including a nanostructure provided with a ligand for effectively coupling the nanostructure to a predetermined chemical or molecular site. Specifically, the microscopic device is directly implanted into patients at predetermined sites, and on reaching the target site the nanostructure is activated to perform a preselected medical diagnostic or therapeutic function. Accordingly, the present invention describes using this method for the treatment of various disrupted by activation of the nanostructure, as well as bone injuries and cancer. Furthermore, the target can consist of a microorganism containing a strand of viral DNA, such that heating the nanostructure can destroy the microorganism, which in turn can be used therapeutically to treat HIV patients. This polypeptide sequence is the human erb-B protein that is over expressed in human breast tumour cells and therefore acts as
NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200
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                                                                                                                                                                                                                                            implantable microscopic device; nanostructure; ligand; gout; bone injury; cancer; HIV; pl; p2; human; erb-B.
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Also described: (1) preparation of EGFR which can be crystallised, in Also described: (1) preparation of EGFR which can be crystallised, in which recombinant EGFR is prepared using Lec8 cells and then complex of EGFR is prepared using Lec8 cells and then complex of the accomplex of EGFR activity regulator (1), in which crystallisable EGFR is contacted with EGF or (1); (3) screening potential crystallisable EGFR; is contacted with EGF or (1); (3) screening potential (1) by determining the fit of the 3D structure of (1) to that of the EGF EGFR complex; (4) substances obtained by the screening method for use as agonists and antagonists of EGFR; (5) screening EGFR mutants

CC EGF. EGFR interaction site, by comparing their 3D structure to that of EGF eGF-EGFR; (5) design of epitopes using their 3D structure of the EGF-EGFR complex; (5) design of epitopes using their 3D structure of the EGF-EGFR complex; (6) preparation of anti-EGF or anti-EGFR antibodies prepared by the method; and (8) polypeptides and their salts containing all or part of the amino acid sequence of the EGFR dimerisation site. (C) has critian method; and (8) polypeptides and their salts containing all or part of the amino acid sequence of the EGFR dimerisation site. (C) has critian and prevention of cancer and cancer proliferation, liver continued and prevention of cancer and cancer proliferation, liver continued and prevention of cancer and cancer proliferation, liver continued and prevention of substances and antagonists of EGFR for use in the continued from disorders, unless and ringworm. The present sequence represents a human ErbBz amino acid sequence, which is used in the exercise of the effects.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Crystalline complex of epithelial growth factor with its receptor for design of ligands and antibodies to the receptor for treatment of ulcers, cancer and Parkinson's disease.
             antiparkinsonian, fungicide,
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                                                                                                                                                                                                                                epithelial growth factor receptor; EGFR; cytostatic; hepatotropic; antiulcer; antidlabetic; dermatological; antiparkinsonian; fungici cancer; cancer proliferation; liver function disorder; ulcer; Parkinson's disease; bone resorption disorder; ringworm; human; protein co-ordinate data; ErbB2.
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Shinozaki M;
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Muramatsu H,
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ELTYLPTNASLSFLQDIQEVQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNG 120
 inhibiting the interaction between a heregulin polypeptide and HER3 polypeptide, e.g. for treating cancer. The polypeptide is also useful stimulating or activating HER3 receptor. This sequence represents the wild type human HER-2 polypeptide.
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                                                                                                                                                                                                   Novel human epidermal growth factor receptor 3 variant as agonist or antagonist of HER3 receptor, for diagnosis/treatment of cells or pathological conditions associated with aberrant expression of heregulin or HER3.
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                                                 EEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This invention relates to a novel method for the prediction, diagnosis, or prognosis of malignant neoplasia by the detection of at least two markers. The invention may also be useful for the development of cytostatic compounds through the regulation of the expression of a gene or activity of a protein associated with malignant neoplasia. The method is useful for prediction, diagnosis or prognosis of malignant neoplasia such as breast cancer, ovarian cancer, pastric cancer, colon cancer, ossophageal cancer, ovarian cancer, bladder cancer or non-small cell ung cancer. The polymucleotides and polypeptides defined in the specification, antisense polymucleotides targeting the polymucleotides, antibodies targeting either one of the polymucleotides, and compounds identified by the screening methods are useful for
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HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM
                                          IDSECRPRERLYSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
                                                                                        AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
                                                                                                                                                                            NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ
                                                                                                                                                                                           Predicting, diagnosing or prognosing malignant neoplasia by detecting least two markers, where the markers are genes from one or more chromosomal regions altered in malignant neoplasia,.
                                                                         EEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEG
                                                                                                                          AGSDVFDGDLGMGAAKGLOSLPTHDPSPLORYSEDPTVPLPSETDGYVAPLTCSPQPEYV
                       IDSECRPRFRELVSEFSRMARDPQRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDA
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                                                                                                                                                                                                                                                                                                                                                                                                                    malignant neoplasia; cytostatic; breast cancer; ovarian cancer gastric cancer; colon cancer; oesophageal cancer; mesenchymal bladder cancer; non-small cell lung cancer; human.
                                                                                                                                                                                                                                                                                                                                                                                           Human malignant neoplasia-related protein SeqID36
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preventing or treating malignant neoplasia. The disease treated is preferably breast cancer. The present sequence is that of a human malignant neoplasia-related protein which may be used in the method the invention.
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100.0%; Score 6812;
Best Local Similarity 100.0%; Pred. No. 0;
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                                                                                                                                                                                                                                                                                                         rheumatoid arthritis; osteoarthritis; juvenile chronic arthritis; systemic sclerosis; Sjogren's syndrome; vasculitis; sarcoidosis; autoimmune haemolytic anaemia; autoimmune thrombocytopenia; thyroiditis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to human PRO polypeptides and the polynucleotides encoding them. The polypeptides and polynucleotides are useful for treating and diagnosing immune related disorders in mammals. The immune related disorders include systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, systemic sclerosis, Sjogren's syndrome, vasculitis, sarcoidosis, autoimmune haemolytic anaemia, autoimmune thrombocytopenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, demyelinating diseases of the central or peripheral nervous system, demyelinating polyneuropathy, polyneuropathy. This sequence represents a human PRO polypeptide of the invention.
NOPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ
                                                                                                     NOPDVRPOPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPO
                                    AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYV
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                                                                                                                                                                                                                                                                                               systemic lupus
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Wu TD;
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                                                                                                                              MELAALCRWGLLLALLPPGAASTQVCTGTDWKLRLPASPETHLDMLRHLYQGCQVVQGNL
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                                                                                                   MELAALCRWGLLLALLPPGAASTOVCTGTDMKLRLPASPETHLDMLRHLYGGCOVVGGNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETEL
                                                    Gaps
                                                    ;
0
    Length 1255;
                                                    Indels
    ..
8
                                                    ö
    DB
                                                 Mismatches
100.0%; Score 6812;
100.0%; Pred. No. 0;
ive 0; Mismatches
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ò	1021	EBYLVPQQGFPCPDPAPGAGGMVHHRHSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG 1080
ପ୍ଧ	1021	BEYLVPQQGFFCPDPAPGAGGWYHTHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEG 1080
ò	1081	AGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTGSPQPEYV 1140
qq	1081	AGSDVFDGDLGMGAAKGLQSLPTHDPSFLQRXSEDPTVPLPSETDGXVAPLTCSPQPEYV 1140
È	1141	NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200
ପ୍ଧ	1141	NQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQ 1200
ò	1201	GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEVLGLDVPV 1255
qq	.1201	.1201 GGAAPQPHPPPAFSPAFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
Search Job ti	comple: ne : 134	Search completed: January 25, 2005, 21:23:22 Job time : 138.725 secs

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GenCore version 5.1.6
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- protein search, using sw model OM protein January 25, 2005, 21:16:15; Search time 36.1624 Seconds (without alignments) 3277.960 Million cell updates/sec Run on:

US-09-806-703A-4_COPY_24_1255 6694 Title: Perfect score: Sequence:

QVCTGTDMKLRLPASPETHL......TFKGTPTAENPEYLGLDVPV 1232

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Maximum Match 100% Listing first 45 summaries Post-processing: Minimum Match 0%

PIR 79:* Database

pirl:* pir2:* pir3:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		d			SUMMAKIES	
Result	ı	Query				
. I	Score	Match	Length	80 :	OT .	Description
-	6688	99.9	-	٦	A24571	protein-tyrosine k
7	5894.5	88.1	_	N	148161	p-185 precursor -
m	5889	88.0		Н	TVRTNU	
4	3157	47.2		Н	GOHUE	epidermal growth f
5	3134	46.8		N	A53183	
9	3118.5	46.6		Н	TVCHLV	
7	2999.5	44.8		N	A47253	epidermal growth f
80	2695	40.3		יו	S06142	~
0	2427.5	36.3		~	A36223	kinase-related tra
10	2344	35.0		α	JC4387	epidermal growth f
11	1766.5	26.4	698	Н	TVFVLV	protein-tyrosine k
12	1703	25.4		Н	TVYUH	protein-tyrosine k
13	1652.5	24.7		-	GOFFE	epidermal growth f
14	1647	24.6	544	ď	S35745	protein-tyrosine k
15	1640	24.5		~	S00727	kinase-related tra
16	1623	24.2		N	B44776	protein-tyrosine k
17	1621	24.2		Н	TVFVEB	protein-tyrosine k
18	1525.5	22.8		~	A36325	epidermal growth f
19	1302	19.5		N	E88257	protein let-23 (im
20	1302	19.5		~	870712	protein-tyrosine k
21	1214	18.1		~	870713	~
22	1177	17.6	-	-	A45558	epidermal growth f
23	1152.5	17.2		7	A42032	
24	997.5	14.9		7	A27131	epidermal growth f
	806.5	12.0	_	7	S13807	~
26	754.5	11.3		~	S13808	protein-tyrosine k
27	720.5	10.8	-	~	T43220	insulin-like growt
28	_	10.7	1382	-4	INHUR	insulin receptor p
29	708.5	10.6	1372	N	A34157	insulin receptor p

A; Molecule type: DNA A; Residues: 832-909 <REX> A; Cross-references: GB:L29395; NID:g459807; PIDN:AAA35809.1; PID:g459808 B;Tal, M.; King, C.R.; Kraus, M.H.; Ullrich, A.; Schlessinger, J.; Givol, D. Mol. Cell. Biol. 7, 2597-2601, 1987 A;Title: Human HER2 (neu) promoter: evidence for multiple mechanisms for transcriptions A;Reference number: 157622; MUID:87286898; PMID:3039351

A;Status: translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-191 <TAL>

A; Accession: I57622

......... Amplilication of a novel v-erbB-related gene in a human mammary carcinoma. A;Reference number: 159509; MUID:85272597; PMID:2992089

A;Status: translated from GB/EMBL/DDBJ

A; Molecule type: mRNA A; Residues: 1-517, 'RALL',522,'S',524-654,'V',656-1169,'A',1171-1255 < COU2> A;Cross-references: GB:M11730; NII:g183986 R;King, C.R.; Kraus, M.H.; Aaronson, S.A. Science 229, 974-976, 1985 A;Title: Amplification of a novel v-erbB-related gene in a human mammary ca

A; Accession: B44188

insulin receptor p	insulin-like growt	protein-tyrosine k	insulin receptor-r	insulin receptor-r	insulin-like growt	insulin-like growt	insulin receptor -	insulin receptor -	insulin receptor (protein-tyrosine k	protein-tyrosine k	tyrosine kinase Mp	protein-tyrosine k	protein-tyrosine k	protein-tyrosine k
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2 A3608	2 T4321	2 T1853	2 B3650	2 A3650	1 IGHUR	2 A3383	2 T3034	1 A5608	2 85724	2 I5061	2 A5409	2 \$4900	1 \$0558	2 83359	2 A363
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10.6 1383 2	1607 2	10.2 1477 2	10.2 1268 2	10.1 1300 2	9.5 1367 1	9.4 1371 2	9.3 1390 2	9.3 2148 1	9.2 2101 2	8.8 952 2	8.8 987 2 1	8.8 977 2 8	8.8 1114 1 8	8.8 1091 2 8	2

ALIGNMENTS

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protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human N.Alternate names: c-erb-B-2 protein precursor; kinase-related transforming protein erb C;Species: Homo sapiens (man)
C;Date: 25-Oct-1997 #sequence revision 06-Dec-1996 #text change 09-Jul-2004
C;Accession: A24571; A25491; A41189; B44188; I59509; I57522
R;Yamamoto, T.; Ikawa, S.; Akiyama, T.; Semba, K.; Nomura, N.; Miyajima, N.; Saito, T.; Nature 319, 230-234, 1986
A;Title: Similarity of protein encoded by the human c-erb-B-2 gene to epidermal growth A;Reference number: A24571; MUID:86118663; PMID:3003577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A, Molecule type: mRNA

A, Residues: 1-1255 cYMA-

A, Residues: 1-1255 cYMA-

A, Cross-references: UNIPROT: P04626; GB: X03363; NID: G31197; PIDN: CAA27060.1; PID: G31198

R, Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.

R, Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.

R, Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.

A, Title: A v-exbB-related protooncogene, G-exbB-2, is distinct from the c-exbB-1/epidez.

A, Reference number: A25491; MUID: 86016729; PMID: 2995967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 737-1031 <SEM>
A; Residues: 737-1031 <SEM>
A; Cross-references: GB:M1167; NID:g182163; PIDN: AAA35808.1; PID:g553282
R; Crossens, L.; Yang-Feng, T.L.; Liao, Y.C.; Chen, B.; Gray, A.; McGrath, J.; Seeburg,
Science 230, 1132-1139, 1985
A; Title: Tyrosine kinase receptor with extensive homology to EGF receptor shares chromo
A; Reference number: A44188; MUID:86070181; PMID:2999974
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Modecule type: DNA
A;Residues: 740-910 <COUI>
A;Cross-references: GB:M12036; NID:g183988; PIDN:AAA35978.1; PID:g183989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: A25491
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p-185 precursor - golden hamster
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 0.2-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: 148161
R;Nakamura, T.; Ushijima, T.; Ishizaka, Y.; Nagao, M.; Arai, M.; Yamazaki, Y.; Ishikawa A;Title: Cloning and activation of the Syrian hamster neu proto-oncogene.
A;Reference number: 148161; MUID:94193007; PMID:7908275
A;Accession: 148161
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Recule type: mRNA
A;Residues: 1-1254 RRES>
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A/Genetics:
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          QPCPINCTHSCVDLDDKGCPAEQRASPLTSIISAVVGILLVVVLGVVFGILIKRRQQKIR
                                                                                  804 GCLLDHVRENRGRLGSQDLLMWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITD
                                                                                                                                                                                                                                                                                                                                                                           FGLARILDIDETEYHADGGKVPIKWALESIIRRRFTHQSDVWSYGVTVWELMTFGAKPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          984 QRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEXLVPQQGFFCPDPAPGAGGWV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1044 HHRHRSSSTRSGGGDLTLGLEPSEERAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
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                                                                                                                                                      ENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPY
                                                                                                                                                                                                                                                   GCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITD
                                                                                                                                                                                                                                                                                                                                                  FGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPY
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                                                                                                                                                                                                                                                                                                            A Gene: GDB:ERBB2; NGL; NEU; HER-2
A;Gross-references: GDB:120613; OMIM:164870
A;Map position: 17421.1-174211.
A;Introns: 25/1; 75/3; 147/1; 883/3
A;Note: the list of introns is incomplete
C;Function:
A;Description: catalyzes the phosphorylation of a peptidyl tyrosine residue by ATP
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphoprotein; phospho
                              30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F;753/Active site: Lys #status predicted
F;1139,1221,1222,1248/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation)
                                about
     PIDN:AAAS8637.1; PID:g553332 of this erbB-related gene occurs in
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Pred. No. 1.8e-270;
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A, Cross-references: GB:M16792; NID:g183983; C; Comment: Amplification and overexpression
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Matches 1230; Conservative
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protein-tyrosine kinase (EC 2.7.1.112) neu precursor - rat C;Species: Rattus norvegicus (Norway rat) C;Date: 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 09-Jul-2004 C;Accession: A24562; A61204 R;Bargmann, C.1.; Hung, M.C.; Weinberg, R.A. Nature 319, 226-230, 1986 Nature 319, 226-230, Nature 319, 226-230, Nature 319, 236-230, Nature 310, Natu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphorotein; phosphorotein; glycoprotein; phosphorotein; glycoprotein; phosphorotein; protein kinase neu #status predicted «MAT» F;20-1260/Product: protein kinase neu #status predicted «TMN» F;23-986/Domain: protein kinase homology «KIN» F;73-739/Region: protein kinase homology «KIN» F;731-739/Region: protein kinase ATP-binding motif F;71,191,263,535,576,634/Binding site: carbohydrate (Asn) (covalent) #status predicted F;591/Rahding site: phosphate (Thr) (covalent) #status predicted F;882,1227,1253/Rainding site: phosphate (Tyr) (covalent) #status predicted
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87.8%; Pred. No. 2.5e-237;
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A,Status: preliminary
A,Molecule type: DNA
A,Molecule type: DNA
A,Residues: 637-663, VV, 665-702 <MAS>
A,Residues: 637-663, VG, 665-702 <MAS>
A,Genetics:
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                                                                                      DODPSERGSPPNTFEGTPTAENPEYLGLDVPV 1254
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                        SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
                                                                                                         ||| | |||||||| || || CWGASPEDCQTLTGTIAPRAVPAARARLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGI
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VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
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A; Reference number: A00641; MUID:84219729; PMID:6328312
A; Accession: A00641
A; Mocession: A00641
A; Mocession: A00641
A; Residues: 1-1210 <ULL>
A; Cross-references: UNIPROT:P00533; EMBL:X00588; NID:931113; PIDN:CAA25240.1; PID:9757
A; Note: the authors translated the codon AAG for residue 540 as Asn
R; Ishii, S.; Xu, Y.; Stratton, R.H.; Roe B.A.; Merlino, G.T.; Pastan, I.
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A; Ritle: Characterization and sequence of the promoter region of the human epidermal gasterence number: A25772; MUID:85270438; PMID:2991899
A; Accession: A25772
A; Status: translation not shown
A; Rocession: A25772
A; Status: 1-29 < A: SHA
A; Rocession: A25772
A; Status: 1-29 < A: SHA
A; Rocession: A25772
A; Cross-references: GB:MI1234; NID:g181981; PIDN:AAA52370.1; PID:g553272
A; Cross-references: GB:MI1234; NID:g181981; PIDN:AAA52370.1; PID:g553272
A; Title: The human EGF receptor gene: structure of the 110 kb locus and identification A; A; Reference number: S30024; MUID:8821733; PMID:3329716
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A.Residues: 25-30,'S',32-51,454-467 <WEB>
A.Residues: 25-30,'S',32-51,454-467 <WEB>
B.Russo, M.W.; Lukas, T.J.; Colone, S.; Staros, J.V.
B.Biol. Chem. 260, 5205-5208, 1985
A.Title: Identification of residues in the nucleotide binding site of the epiderme A;Accession: A60143
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A.Residues: 740-744,'X',746-747 <RUS>
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A.Title: ATP-stimulated interaction between epidermal growth factor receptor and & A;Reference number: A38023; MUID:8419154; PMID:6325948
A;Reference number: a38023; MUID:8419154; PMID:6325948
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R;Haley, J.D.; Waterfield, M.D.
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A;Fitle: Contributory effects of de Novo transcription and premature transcript
A;Reference number: A38672; MUID:91107677; PMID:1988448
A;Accession: A38672
A;Molecule type: DNA
A;Residues: 1-29 cHAL>
A;Residues: 1-20 cHAL>
A;Re
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A;Residues: 713-964 <LIN>
A;Residues: 713-964 <LIN>
A;Residues: 713-964 <LIN>
A;Residues: 713-964 <LIN>
B;Simmen, F.A.; Gope, M.L.; Schulz, T.Z.; Wright, D.A.; Carpenter, C
B;Simmen, B;Ophys. Res. Commun. 124, 125-132, 1984
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A;Accession: A23062
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A;Residues: 1028-1210 <SIM>
A;Residues: 1028-1210 <SIM>
C;Weber, W.; Gill, G.N.; Speiss, J.
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A;Molecule type: DNA
A;Residues: 1-29 <HA2>
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Nature 309, 418-425, 1984
A,Title: Human epidermal growth factor receptor cDNA sequence and aberrant expression
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                                        GDPASNTAPLOPEQLOVFETLEEITGYLYISAWPDSLPDLSVFONLOVIRGRILHNGAYS
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epidermal growth factor receptor precursor - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Accession: 453183; A43818; $24492; A28941; S45325; 149643
R;Luetteke, N.C.; Phillips, H.K.; Qiu, T.H.; Copeland, N.G.; Earp, H.S.; Jenkins, N.A.; Genes Dev. 8, 399-413, 1994
A;Title: The mouse waved-2 phenotype results from a point mutation in the EGF receptor A;Reference number: A53183; MUID:94170986; PMID:8125255
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A; Residues: 1-1210 <LUBs>
A; Cross-references: UNIPROT: Q01279; GB: U03425
A; Cross-references: UNIPROT: Q01279; GB: U03425
B; Avivi, A.; Lax, I.; Ullrich, A.; Schlessinger, J.; Givol, D.; Morse, B.
Oncogene 6, 673-676, 1991
A; Title: Comparison of EGF receptor sequences as a guide to study the ligand A; Reference number: A43818; MUID: 91232866; PMID: 2030916
                                                                                                                                           SKPYDGIPASEISSILEKGERLPQPPICTIDVYMIMVKCWMIDADSRPKFRELIIEFSKM
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                                                      QKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGIW
                                                                             LMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHV
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1150 TFDSPAHWAQKGSHQISLDNPDYQQDFFPKEAKPNGIFKGS-TAENAEYL 1198
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A; Residues: 1-714 <ANYS>
A; Cross-references: GB:X59698
R; Eisinger; D.P.; Serrero, G.
submitted to the EMBL Data Library, Ju
A; Reference number: $24942
A; Accession: S24942
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A;Residues: 969-971, Kr, 973-1115, D'
A;Cross-references: EMBL: 212608
R;Heisermann, G.J.; Gill, G.N.
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A/Cross-references: GDB:120610; OMIM:131550
A/Map position: 7p12.3-7p12.1
C/Superfamily: epidermal growth factor receptor; protein kinase homology
C/Superfamily: epidermal growth factor receptor; protein kinase homology
C/Superfamily: epidermal growth factor receptor; protein; phosphorylation; duplication; glycoprotein; phosphorylation; duplication; glycoprotein; phosphorylation; signal sequence #status predicted <SIT>
F/15-24/Domain: signal sequence #status predicted <AMT>
F/25-645/Domain: EGF receptor extracellular domain repeat <EEL>
F/35-300/Domain: EGF receptor extracellular domain repeat <EEL>
F/35-300/Domain: EGF receptor extracellular domain repeat <EEL>
F/36-668/Domain: transmembrane #status predicted <TWM>
F/300-600/Domain: protein kinase homology <KIN>
F/10-975/Domain: protein kinase homology <KIN>
F/10-975/Domain: protein kinase ATP-binding motif
F/1047-1210/Region: inhibitory
F/1047-1210/Region: inhibitory
F/1047-1210/Region: cared-plu mediated internalization signal
F/1047-1210/Region: cared-plu #status experimental
                              Ω.ς.
A;Note: the EGF receptor (and other tyrosine kinases) can nick double-stranded DNA R;Chen, W.S.; Lazar, C.S.; Lund, K.A.; Welsh, J.B.; Chang, C.P.; Walton, G.M.; Der, C.J Cell 59, 33-43, 1989
A;Title: Functional independence of the epidermal growth factor receptor from a domain A;Reference number: A3331; MUID:9000323; PMID:2790960
A;Contents: annotation; internalization signal
C;Comment: Binding of EGF to the receptor leads to internalization of the EGF-receptor
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47.2%; Score 3157; DB 1; 1
Best Local Similarity 49.9%; Pred. No. 5.6e-124;
Matches 624; Conservative 178; Mismatches 344;
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TYCHLY

Sepidermal growth factor receptor precursor - chicken

Njochtains: protein-tyrosine kinase (EC 2.7.1.112) erbB

Cjacies: Gallus gallus (chicken)

Cjacie: 28-Feb-1986 #sequence_revision 05-May-1995 #text_change 09-Jul-2004

CjAccession: A27720; A00643

Rjax, I: Johnson, A.; Howk, R.; Sap, J.; Bellot, F.; Winkler, M.; Ullrich, A.; Vennst.

Mol. Cell. Biol. 8, 1970-1978, 1988

A;Title: Chicken epidermal growth factor (EGF) receptor: cDNA cloning, expression in mon-
A;Reference number: A27720; MUID:88261272; PMID:3260329

A;Accession: A27720.
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A, Residues: 1-1223 - LAIX-
A, Cross-teferences: UNIPROT: P00534; GB: M20386
R, Nilsen, T.W.; Maroney, P.A.; Goodwin, R.G.; Rottman, F.M.; Crittenden, L.B.; Raines
Cell 41, 719-726, 1985
A; Title: c-erbB activation in ALV-induced erythroblastosis: novel RNA processing and
A; Reference number: A00643; MUID: 85228222; PMID: 2988784
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                        RPEDECVGEGLACHOLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNAR
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J. Biol. Chem. 263, 13152-13158, 1988

A;Title: Epidermal growth factor receptor threonine and serine residues phosphorylated in A;Reference number: A28941, MUID:88330814; PMID:3138233

A;Accession: A28941

A;Molecule type: protein

A;Molecule type: protein

A;Molecule type: protein

A;Mesidues: 689-694, X; 696-704, L, 706-707;989-992, XX',995-996, X',998-1000;1002-1009, R;Hibbs, M.L; Dunn, A.R.; Alexander, W.S.

submitted to the EMBL Data Library, April 1994

A;Description: The complete cDNA sequence of the Mouse Epidermal Growth Factor Receptor A;Reference number: 845325

A;Residues: 845325

A;Status: preliminary

A;Cross-references: EMBL:X78997; NID:9488830; PIDN:CAA55587.1; PID:9488831

A;Residues: 1-971, Y, Y, 973-1210 <VER>
A;Cross-references: EMBL:X78997; NID:9488830; PIDN:CAA55587.1; PID:9488931

A;Title: Expression of the epidermal growth factor receptor gene is regulated in mouse b, A;Reference number: 149643; MUID:93126380; PMID:7678348

A;Status: translated from GB/EMBL/DDBJ

A;Residues: 12-20, 22-132 <RES>
A;Cross-references: GB:L06864; NID:9193001; PIDN:AA53029.1; PID:9567201

C;Genetics:
C;
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49.9%; Pred. No. 5e-123;
tive 170; Mismatches 352; Indels 108;
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Matches 627; Conservative 170;
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epidermal growth factor receptor, HER4 - human C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 22-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C;Accession: A47253
R;Plowman, G.D.; Culouscou, J.M.; Whitney, G.S.; Green, J.M.; Carlton, G.W.; Foy, L.; N Proc. Natl. Acad. Sci. U.S.A. 90, 1746-1750, 1993
A;Title: Ligand-specific activation of HER4/pl80erbB4, a fourth member of the epidermal A;Reference number: A47253; MUD:93189574; PMID:8383326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid
A;Note: sequence extracted from NCBI backbone (NCBIP:126842)
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: AP; growth factor receptor
F;716-981/Domain: protein kinase homology «KIN»
F;724-732/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                        RMARDPQRFVVIQ-NEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPA 1013
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                                                                                                                                                                               TQLMPYGCLLDYIREHKDNIGSQYLLNWCVQIAKGMNYLBERRLYHRDLAARNVLVKTPQ
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                                                                                           TOLMPYGCLLDHVRENRGRLGSQDLLNWCMOIAKGMSYLEDVRLVHRDLAARNVLVKSPN
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                                                                                                                                                                                                                                                                                                                                  FGAKPYDGIPAREIPDLLEKGERLPOPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFS
                                                                                                                                                                                                                                                                                                                                                           1069 MGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSET--DGYVAPLTCSPQPEYVNQPDVRPQP
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                                                                                                                    C; Keywords: alternative splicing; ATP; autophosphorylation; glycoprotein; growth factor c; Keywords: alternative splicing; ATP; autophosphorylation; glycoprotein; growth factor pecific protein kinase
pecific protein kinase
F;1-30/Domain: signal sequence #status predicted <SIG>
F;31-1223/Product: epidermal growth factor receptor #status predicted <AXT>
F;31-654/Domain: extracellular #status predicted <AXT>
F;31-50/Domain: EGF receptor extracellular domain repeat <EE1>
F;397-610/Domain: EGF receptor extracellular domain repeat <EE2>
F;397-610/Domain: transmembrane #status predicted <IVM>
F;397-610/Domain: transmembrane #status predicted <IVM>
F;397-610/Domain: protein kinase homology <KIN>
F;719-984/Domain: protein kinase homology <KIN>
F;719-984/Domain: protein kinase ATP-binding motif F;719-984/Domain: protein kinase ATP-binding motif F;719-984/Domain stee: carbohydrate (Ser) (covalent) #status predicted F;687/Binding site: carbohydrate (Ser) (covalent) #status predicted F;687/Binding site: Lys #status predicted F;754/Active site: Lys #status predicted Tyr) (covalent) (by protein kinase C) #status predicted F;1100,1183,1208/Binding site: Dys hosphate (Tyr) (covalent) (by autophosphorylation) #stat
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                                               A;Cross-references: GB:MI0066 C;Genetics: A;Gene: exbB
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	HULT 8 Iltaracte nate to be	Db 204 CWAPGPGHCQKFTKLLCAEQCNRRCRG Qy 240 ICELHCPALVTYNTDTFESMPNPEGRY' : : : : :
62 LIAHNOVROVPLORLRIVNGTOLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELOLRS 121 [256 CUTOCPOTEVVINPTITOLEHENDAKTYOARCOMINO-UDSSSCYARCESSKREV- 315 301 ARDIGTOREKCSKRCANCYCLGMEHENDAKTYOARCOMINO-UDSSSCYARCESSKREV- 315 316 DENSYTDALOPECILOTETICETICATICA SAPPOSLEDEATOROUGHINPALIFILIELITE 13 1 1 1 1 1 1 1 1	VSVPYRAPTSTIPEAPVAQGATAEIFDDSCCNGTLRKEVAPHVQEDSSTQRYSADFTVFA PSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERAKTL
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.025/3; 1056/1
receptor; protein kinase homology
phosphotransferase; transmembrane protein; tyrr
predicted <SIG>
coming protein (Tu) #status predicted <MAT>
reting motif
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or receptor homolog; kinase-related transforming
rn platyfish)
0-Sep-1999 #text_change 09-Jul-2004
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                                                                                         SNG-----PEKAEDEYVNEPLYLNTFANTLGKA 1219
----- 1189
                                                                                                                                    OPPERGA--PPSTFKGTPT------A 1220
                                                                                                                                                                        SLPPRSTLQHPDYLQEYSTKYFYKQNGRIRPIVA 1279
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No. 8e-105;
matches 382; Indels 132; Gaps
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284; PIDN:CAA39763.1; PID:g65285
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A36223
kinase-related transforming protein (erbB3) (EC 2.7.1.-) precursor - human C;Species: Homo sapiens (man)
C;Species: 04-Oct.1991 #sequence_revision 13-Jan-1993 #text_change 09-Jul-2004 C;Accession: A36223; I59164
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R;Kraus, M.H.; Issing, W.; Miki, T.; Popescu, N.C.; Aaronson, S.A.

Proc. Natl. Acad. Sci. U.S.A. 86, 9193-9197, 1989
A;Title: Isolation and characterization of ERBB3, a third member of the ERBB/A;Reference number: A36223; MUID: 90083234; PMID: 2687875
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A;Cross-references: UNIPROT: P21860; GB: M29366
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A;Cross-references: UNIPROT: P21860; GB: M29366
A;Title: Molecular cloning and expression of another epidermal growth factor A;Recession: IS9164
A;Accession: IS9164
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A;Accession: IS9164
A;Accession: IS9164
A;Residues: 1-559, G', 561-957, F', 959-1063, G', 1065-1342
A;Cross-references: GB:M34309; NID:g183990; PIDN: AAA35979.1; PID:g306841
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A,Cross-references: GDB:119880; OMIM:190151
A,Map postion: 12q13-12q13
C,Superfamily: unassigned & Ex/Thr or Tyr-specific p. C,Keywords: ATP; phosphotransferase
F,707-972/Domain: protein Kinase homology <KIN>F,715-723/Region: protein kinase ATP-binding motif
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F;713-721/Region: protein kinase ATP-binding motif
F;939,1051,1156,1194,1196,1219,1257,1259,1273,1286,1325/Binding site: phosphate (Tyr)
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                                                                                                                                                                                                           CELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEVT 300
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                                                                                                                                                         CVPRCPEPLVYNKLTFQLEPNPHTKYQYGGVCVASCPHNFV-VDQTFCVRACPPDKMEVD
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                                                                                                                                                                                                                                                WGESSEDCOSLTRTVCAGGC-ARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QKIR-KYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGI
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                                                                   148;
                                          Length 1339;
                                       35.0%; Score 2344; DB 2;
.larity 41.0%; Pred. No. 3.4e-90;
Conservative 170; Mismatches 424;
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N;Alternate names: ErbB3 protein; HER3 protein
C;Species: Rattus norvegicus (Norway rat)
C;Date: 17-Jan-1996 #sequence_revision 19-Apr-1996 #text_change 16-Aug-2004
                                         NHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRFTHQSDVWSYGVTVWELM
                                                                                                                                                                                             TEGAEPYAGLRLAEVPDLLEKGERLAQPQICTIDVYMVMVKCMMIDENIRPTEKELANEF
                                                                                                                                                                                                                                                                                                                                                  P-GKNGVV-----KDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYWD---
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ECRPCHENCTOGCKGPELQDCLGQTLVLIGKTHLTMALTVIAG--LVVIFMMLGGTFLYW
                          ROOKIR-KYTWRRLLOETELVEPLTPSGAMPNOAOMRILKETELRKVKVLGSGAFGTVYK
                                                                           GIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQL
                                                                                        VTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSP
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TRMARDPPRYLVIKRES-GPGIAPGPEPHGLINKKLESVELEPELDLDLDLEAEED----
                                                                                                                                                                                                                                                                                                                                                                                    GAAKGLQSLPTHD-PSPLQRYSEDPTVPLP----SETDGYVA-------
                                                                                                                                                                                                                                                                                                                                                                                                    SCQESAVSGSSERCPRPVSLH-----PMPRGCLASESSEGHVTGSEAELQEKVSMCRSR
                                                                                                                                                                                                                                                                                                                                  1011 DPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEP-SEEEAPRSPLAPSEGAGSDVFDGDLGM
                                                                                                                                                                                                                                                                                                                                                                                                                                     1107 PLTCSPQPE----YVNQPDVRPQPPSPREGP-----LPAARPAGATLERAKTLS
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දු දු	1016 AGGWVHHRRSSSTRSGGGDLTLGLEPSEE	් සි	914 KGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRMARDPQRFVVIQ-NEDLG 972
රු පි	1056 EGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYV 1105	දු දු	973 PASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSG 1032 473 LPSPTDSKFYRTLMEEEDMEDIVDADEYLVPHQGFFNSPST 513
රු සි	1106APLTCSPQPEYVNQPDVRPQPPSPREGPLPA 1136	<i>&</i> 원	1033 GGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQ 1087
රු සි	1137 ARPAGATLERAKTLSP-GKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPP 1187	% qa	1088 RYSEDPIVPLPSETDGYVAPLTCSPQPEXVNQPDVRPQPPSPREGPLPAARPAGATLE 1145
RESULT TVFVLV protein N; Contu C; Spec C; Date	n-tyrosine kinase (EC 2.7.1.112) erbB - avian leukosis virus ains: amino end of gag protein; env protein fragment; protein-tyrosine kinase ess: avian leukosis virus, ALV 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 09-Jul-2004 seion: B00643; A00643	8 8 8	1146 RAKTLSPGKNGVVKDVF
A; NILS Cell 4: A; Refe: A; Accer A; Mole	<u>≥</u> ; p	RESULT 12 TVYUH protein-ty C;Species: C;Date: 18	RESULT 12 TVYUH protein-tyrosine kinase (EC 2.7.1.112) erbB - avian erythroblastosis virus (strain H) C;Species: avian erythroblastosis virus C;Date: 18-Apr-1984 #sequence_revision 18-Apr-1984 #text_change 09-Jul-2004
A; Note C; Comm C; General		C; Access R; Yamamc Cell 35 A; Title A; Refer	iion: A00644; A38022 oto, T.; Nishida, T.; Miyajima, N.; Kawai, S.; Ooi, T.; Toyoshima, K. 7778, 1983 The erb8 gene of avian erythroblastosis virus is a member of the src gene fami ence number: A00644; MUID:84026539; PMID:6313229
A) Gene C, Supe C, Keyw F; 1-59 F; 60-6 F; 194 F; 202	A;Gene: gag-env-erbB C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Keywords: ATP; oncogene; phosphotransferase; transforming protein; tyrosine-specific p F;1-6/Product: gag protein (fragment) #status predicted <gag> F;7-59/Product: env protein (fragment) #status predicted <env> F;0-6098/Product: protein-tyrosine kinase erbB #status predicted <erb> F;194-459/Domain: protein kinase homology <kin> F;202-210/Region: protein kinase ATP-binding motif F;203-Active site: Lys #status predicted</kin></erb></env></gag>	A; Access A; Molect A; Resid A; Cossid A; Debui: S; Debui: A; Title A; Title A; Access	A;Accession: A00644 A;Mclecule type: DNA A;Mclecule type: DNA A;Residues: 1-604 «YAM» A;Residues: 1-604 «YAM» A;Cross-references: UNIROT:P00535; GB:K01216; NID:g209676; PIDN:AAA42400.1; PID:g20967 A;Cross-references: UNIROT:P00535; GB:K01216; NID:g209676; PIDN:AAA42400.1; PID:g20967 R;Debuire, B.; Henry, C.; Benaissa, M.; Biserte, G.; Claverie, J.M.; Saule, S.; Martin, Science 224, 1456-1459, 1984 A;Title: Sequencing the erbA gene of avian erythroblastosis virus reveals a new type of A;Reference number: A38022; MUID:84223957; PMID:6328658
Quer Best Matcl	Query Match 26.4%; Score 1766.5; DB 1; Length 698; Best Local Similarity 52.2%; Pred. No. 1.6e-66; Matches 374; Conservative 80; Mismatches 137; Indels 125; Gaps 18;	A;Molecu A;Residu A;Cross C;Genet:	<pre>ile type: DNA tas: 1-28,'W',30-139,'F',141-145,'V',147-152 <deb> references: GB:K02006 cs:</deb></pre>
& 8 &	GPEADQCVACAHYKOPPECVARCPSGVKPDLSYMPIWKFPDEBGACQPCPINCTHSCVDL 614	A; Gene: C; Super; C; Keywo; F; 130-39	erbB :amily: epidermal growth factor receptor; protein kinase homology ses ATP; oncogene; phosphotransferase; transforming protein; tyrosine-specific 15/Domain: protein kinase homology «XIN» 16/Region: protein kinase ATP-binding motif
8 8 8	DKGCPAEQRASPLTSIVSAVV-GILLVVVLGVVFGILIKRRQQKIRKYTWRRLLGETEL 673 GLEGCPNGSKTPSIAAGVVGGLLCLVVVGLGIGLYLRRR-HIVRKRTLRRLLGEREL 172	F;165/Ac Query Best l	165/Active site: Lys #status predicted Query Match Best Local Similarity 52.2%; Pred. No. 6.1e-64;
<u>\$</u> 8	o/4 VEFLIFDGAMTROQMALLKEFELKKVKVLGSGAFGTYXKGIMIPDGENVKIPVAIKYLK 733 	Matches Qy	ss 360; Conservative 76; Mismatches 128; Indels 126; Gaps 16; 564 CAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQ 623
중 음	734 ENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGR 793 	g &	SVLGENDTĽ-VRKYADANAVCQLCF LVVVLGVVFGILIKRRQQKIRKYT
& g	794 IGSQDLIANGWQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETE 853	qa , XX	59 NGSKTPSIAAGVVGGLLCLVVVGLGIGLYLRRR-HIVRKRTLRRLLQERELVEPLTPSGE 117 683 MPNQAQMRILKETELRKVKVLGSGAPGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANK 742
ò	854 YHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE 913	qa	

Qy 743 EILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNW 8 	802	F;774/Binc F;843/Acti F;1181/Bir	,774/Binding site: phosphate (Thr) (covalent) (by protein kinase C) #status predicted;843/Active site: Lys #status predicted;1181/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation) #status predic
OY 803 CMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVP 8	962	Query Match Best Local Matches 41	/ Match Local Similarity 29.9%; Pred. No. 1.6e-61; nes 413; Conservative 180; Mismatches 415; Indels 371; Gaps 39;
Qy 863 IKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPP 9	922	કે ઇ	57 VQGYVLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASP 111 : :: :: ::
923 ICTIDVYMIMVKCWMIDSECRPRFRELVSERSRMARDPORFVVIO-NEDLGPASPLDSTF	186	} &	LIDTNRSRACHP
358 ICTIDVYMIMVKCWMIDADSRPKFRELIAEFSKWARDPPRYLVIQGDERWHLPSPTDSKF	417	. 음	SKMYTLEIPDLERDVLNGQVGFHNNYNLCHMRTIQWSEIVSNGTDAYYNYDFTAPERECPK
QY 982 YRSLLEDDDWGDLVDABEXIVPQQGFFCPDPAPGAGGMVHHRHRSSTRSGGGDLTLGLE 1	1041	Sy qq	172 CSPMCKGSRCWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDC 229
Qy 1042 PSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVP 1	1096 495	Sy Op	230 LACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCT 289 : : : : : : 201 IACKNFFDEAVSKEECPPMRKYNPTTYVLETNPEGKYAYGATCVKECP-GHLLRDNGACV 259
Qy 1097 LPSETDGYVAPLTCSPQPEXVNQPDVRPQPPSFREGFLPAARPAGATLERAKTLSPGK 1	1154 524	oy Op	290 LVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFG 349 260 RSCPQDKMDKGGECVPCNGPCPKTCPGVTVLHAGNIDSFRNCTVIDG 306
Qy 1155 NGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFD 1	1195 574	S S	350 SLAFLPBSFDGDPASNTAPLQPEQLQVFETLBEITGYLXISAMPDSLPDLSV 401 ::
OY 1196 NLYYMDQDPPERGAPPSTFKGTPTAENPEY 1225 Db 575 SSPYWIQSGNHQINLDNPDY 594		දු දු	402 FQNLQVIRGRILHNGAY-SLTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWD 460
RESULT 13		8 6	461 QLFRNPHQALLHTANRPEDEC
epidermal growth factor receptor - fruit fly (Drosophila melanogaster) Nicontains: protein-tyrospine kinase (EC 2.7.1.112) erbB		3 ∂3	
C;Species: Drosophila melanogaster C;Date: 17-Mar-1997 #sequence_revision 17-Mar-1997 #text_change 09-Jul-2004 C:Accession: A00640: A38021	ett	Db	487 GSWHGSVPYLQELQFQWHLHRRLWLYIQVSINSTQDKSNEHQLTDACYSPSVPTSLTIER 546
B.Z.	or in the second	8 8	482VGEGLA 487 482VGEGLA 487 647 ADVATOGAGIAMELEOTTADGAGMPHGKTI-DARGBOVDBWVFIGWCAGARATARPLAGR 606
		3 8	
A;Molectute type: DNA A;Residues: 1-1330 <liv> A:Cross-references: UNIPROT:P04412: EMBL:K03054</liv>		Db	607 AVCRKCHPLCELCTNYGYHEQVCSKCTHYKRREQCETECPADHYTDEEQRECFQ 660
1000	; ; ; ;	<i>&</i> 4	540 CHPECQPQNGSVTCFGPBADQCVACAHYKDPPFCVARCPSGVK-PDL 585
A;iter: A Disconinta genomic sequence with nomotogy to numan epiderman growth A;Reference number: A38021; MUID:85137938; PMID:2983232 A;Accession: A38021	n raccor re	g &	
A; Molecule type: DNA A; Residues: A', 832-866,'V',868-943,'QTPSLVK' <wad></wad>		qq	: : : : : : : : : :
A)CLOSS-TELETELEGENCES: EMBL: AAZZ33; NIV:9/32Z; FIDN:CAAZZ13:; FID:93Z33S3 C;Comment: This sequence is tentative because the introns have not been ident C;Genetics: A.Gene: FlyBaes-Enfr	ified.	ð f	646 VVFGI-LIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVKV 702 :: : ::
A;Cross-references: PlyBase:PBgn0003731 A;Wap position: 2 57F C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Reywords: APP; autophosphorylation; duplication; qlycoprotein; phosphoprot		8 & 8	LGSGAFGTVYKGTWI PDGENVKI PVAIKVLRENTSPKANKEI LDEAVYMAGVGSPYVSRL
F.1-732/Domain: extracellular #status predicted <ext> F.733-744/Domain: transmembrane #status predicted <twm> F.765-1330/Domain: intracellular #status predicted <int> F.765-130/Domain: protein kinase homology <kin></kin></int></twm></ext>		දු පු	763 LGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIAKGMSYLEDVRLVHRD 822 : :: :
F;816-824/Region: protein kinase ATP-binding motif F;122,300,324,363,518,688,695,700/Binding site: carbohydrate (Asn) (covalent)	#status pr	ò	823 LAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQ 879

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Kingge-related transforming protein (erbB) (EC 2.7.1.-) - avian erythroblastosis virus C;Species: avian erythroblastosis virus C;Date: 01-Dec-1989 #sequence_revision 01-Dec-1989 #text_change 09-Jul-2004 C;Accession: S00727 R;Scotting, P.; Vennstrom, B.; Jansen, M.; Graf, T.; Beug, H.; Hayman, M.J. A;Title: Common site of mutation in the erbB gene of avian erythroblastosis virus mutan A;Reference number: S00727; MUID:88217326; PMID:2897102
                                                                                                                                                                                              1088 RYSEDPTVPLPSETDGYVAPLTCSPOPEYVNOPDVRPOPPSPREGPLPAARPAGAT-LER 1146
                                                                                                                                                                                                                                                                                                 .033 GGDLTLGLEPSEERAPRSPL----APSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQ 1087
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                                                                                                  KGERLPOPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRMARDPORFVVIQ-NEDLG 972
                                                                                                                              KGERLPOPPICTIDVYMIMVKCWMSDADSRPKFRELIAEFSKWARDPPRYLVIOGDBRMH 413
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                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GP--DHCMKCAHFIDGPHCVKACPAGVLGENDTL-VWKYADANAVCQLCHPNCTRGCKGP
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                                   YHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE
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C,Superfamily: epidermal growth factor receptor; protein kinase homology
C,Keywords: ATP; phosphotransferase
F;135-4400/Domain: protein kinase homology <KIN>
F;143-151/Region: protein kinase ATP-binding motif
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A;Residues: 1-545 <SCO>
A;Cross-references: UNIPROT:Q85468; UNIPROT:Q64895; EMBL:X06943
C;Genetics:
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                                                     294
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C; Date: 03-Mar-1994 #sequence_revision 26-May-1995 #text_change 09-Jul-2004
C; Date: 03-Mar-1994 #sequence_revision 26-May-1995 #text_change 09-Jul-2004
C; Accession: 835745
R; Vennstroem, B.
Submitted to the EMBL Data Library, March 1993
A; Reference number: 835745
A; Molecule type: DNA
A; Reference number: 835745
A; Molecule type: DNA
A; Residues: 1-544 - VEN>
A; Cross-references: UNIPROT: Q85468; UNIPROT: Q64895; EMBL: X12707
C; Genetics:
A; Genetics:
A; Genetics:
A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics: A; Genetics:
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-- PPPAFSP-AFDNLYYWD 1201
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                                                                         SDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMID
                                                                                                                                                                       940 SECRPRFRELVSEFSRMARDPORFVVIQNEDLG--PASPLDSTFYRSLLEDD---DMGDL
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24.6%; Score 1647; DB 2; Length 544;
Best Local Similarity 54.9%; Pred. No. 1.2e-61;
Matches 345; Conservative 70; Mismatches 121; Indels 92
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                                                                                    1088 RYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGAT-LER 1146
482 -------PVREDGFL------PAPEYVNQ--LMPKKPSTAMVQNQIYNYISLTAISK 523
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Search completed: January 25, 2005, 21:30:21 Job time : 45.1624 secs

P21860 homo sapien Q62799 rattus norv P7974 fugu rubrip Q8aw81 brachydanio Q7ppn5 anopheles g Q7phu anopheles g Q9bin9 anopheles g Q6zmm4 homo sapien Bad18701 homo sapien Aar85155 drosophil Aar85224 drosophil Aar85224 drosophil

ERB3_HUMAN . ERB3_RAT . ERB3_RAT . ERB3 . RAT . ERB3 . RAT . ERB3 . RAT . ERB3 . ERB3

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2436.5 2367.2 22.11.7 20.49.5 20.49.5 20.25.5 20.25.5 20.09 20.09 20.09 20.09

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GenCore version 5.1.6

Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: January 25, 2005, 21:14:59; Search time 167.437 Seconds

(without alignments)

4233.600 Million cell updates/sec

Title: US-09-806-703A-4_COPY_24_1255

Perfect score: 6694

1 OVCTGTDMKLRPASPETHL......FFKGTPTAENPEYLGLDVPV 1232

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched: 1825181 seqs, 575374646 residues

Total number of hits satisfying chosen parameters: 1825181

Minimum DB seq length: 0

Maximum DB seq length: 2000000000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

1: uniprot_sprot:*
2: uniprot_trembl:*

UniProt 02:*

Database

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Description	101400 CMCH 2CA100		O18735 canis tamil	Q8k3f9 rattus norv	Q6p732 rattus norv	Aah61863 rattus no	P06494 rattus norv	Q60553 mesocricetu	Q6zpe0 mus musculu	Bac98297 mus muscu	Q8c0e7 m mus muscu	Q9qx70 rattus norv	Q80y89 mus musculu	P00533 homo sapien		Q8mil8 sus scrofa	Q01279 mus musculu	Q9ep98 mus musculu	Q15303 homo sapien		Aag77349 rattus no	Q7szf7 brachydanio	Q6ua29 rattus norv	Aag77348 rattus no	Q6vqa3 brachydanio	Aaq91602 brachydan	Q62956 rattus norv	Q6xiv8 xiphophorus		Q9yh40 xiphophorus		
SUMMARIES	MAMIN COOR	PADE HOME	018735	Q8K3F9	Q6P732	AAH61863	ERB2 RAT	ERB2 MESAU	Q6ZPE0	BAC98297	Q8C0E7	Q9QX70	Q80Y89	EGFR HUMAN	AAS83109	QBMIL8	EGFR MOUSE	Q9EP98	ERB4 HUMAN	Q6UA <u>2</u> 8	AAQ77349	Q7SZF7	Q6UA29	AAQ77348	Q6VQA3	AAQ91602	ERB4 RAT	06xJV8	AAP55673	Q9YH40	Q9W6F6	XMRK_XIPMA
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% Query Match	000		92.5	88.1	88.1	88.1	88.1	88.1	87.8	87.8	62.8	47.2	47.2	47.1	47.1	47.0	46.8	46.8	44.8	44.6	44.6	44.5	44.5	44.5	44.4	44.4	44.3	42.8	42.8	41.0	40.8	40.5
Score	0000	000	6195	5899.5	5895.5	5895.5	5895	5894.5	5877.5	5877.5	4207	3160.5	3159.5	3155	3155	3143.5	3135	3132	2999.5	2982.5	2982.5	2981.5	2980.5	2980.5	2972.5	2972.5	2965.5	2864	2864	2742.5	2729.5	2711.5
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(Potential).
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                 Cytoplasmic (Potential)
Protein kinase.
ATP (By similarity).
ATP (By similarity).
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DR RWEL; MI1767; AAA3808 1; JOINED.

DR RWEL; MI1764; AAA3808 1; JOINED.

DR RWEL; MI1766; AAA3808 1; JOINED.

DR RWEL; MI1709; AAA77493 1; JOINED.

DR RWEL; MI1709; AAA77493 1; JOINED.

DR RWEL; MI1709; AAA77493 1; JOINED.

DR RWEL; MI2036; AAA3808 1; JOINED.

DR RWEL; MA208911; AA018082 1; JOINED.

DR PIR; A42671; A24571.

DR PDB; JURX; X-243; R=55-662.

DR GO: GO: GO043125; F:EXBB 3 class receptor binding; TAS.

GO; GO: GO043125; F:EXBB 3 class receptor protein tyrosine kinase . .; TAS.

DR GO; GO: GO043125; F:EXBB 3 class receptor protein signaling pa. .; TAS.

GO; GO: GO043125; F:EXBB 3 class receptor protein signaling pa. .; TAS.

DR GO; GO: GO04415; F:ExBB 2 creect.

DR HIGEPPO: JERGOG212; Furin-like.

DR INTERPO: JERGO0494; EGFR L.

DR INTERPO: JERGO0494; EGFR L.

DR INTERPO: JERGO0494; FOY Exinase.

DR HEAP PROJECT: JERGO0494; TAY Exinase.

DR Ffam; PF00059; FUIP. 2.

DR Ffam; PF00757; FUIP. 2.

DR Ffam
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Receptor protein-tyrosine kinase erbB-2.
Extracellular (Potential).
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REMARY; PROUDON; PROTECTIONS:
REMARY; PROUDON; PROTECTIONS:
REMARY; SMOUZOL; PU, 3.
REMARY; SMOUZOL; PU, 3.
REMARY; SMOUZOL; PROTEIN KINASE ATP; 1.
REMARY; PROSITE; PSOUDOL; PROTEIN KINASE TRP; 1.
REMARY; PROSITE; PSOUDOL; PROTEIN KINASE TRP; 1.
REMARY; PROSITE; PROTEIN KINASE TRP; 1.
REPROSITE; PROTEIN KINASE TRP; 1.
REMARY; PROSIDE; PROTEIN KINASE TRP; 1.
REMARY; PROSIDE; PROTEIN KINASE FARMENDIA; PROSIDE; PROTEIN KINASE; RECEPTOR; SIGNAL; 1.
REMARY; RECEPTOR; RECEPTOR; PROTEIN KINASE EXTRACELIULAR (POTENTIAL).
RECEPTOR FARMENDIA (POTENTIAL).
RECEPTOR FARMENDIA (POTENTIAL).
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HINNIN HI
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R GO; GO:0016620; C:membrane; IEA.

R GO; GO:0016620; F:ATP binding; IEA.

R GO; GO:0016740; F:transferase activity; IEA.

R GO; GO:001649; F:transferase activity; IEA.

R GO; GO:001649; F:transferase activity; IEA.

R GO; GO:001649; F:transferase activity; IEA.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000404; Furin, repeat.

R InterPro; IPR001049; Rinase like.

R InterPro; IPR001049; Rinase like.

R InterPro; IPR001049; Tyr_Dkinase.

R InterPro; IPR001049; Tyr_Dkinase.

R InterPro; IPR001049; Tyr_Dkinase.

R InterPro; IPR001040; Furin-like; 1.

R Fam; PR001030; Recep L. domain; 2.

R Fam; PR001030; Recep L. domain; 2.

R Fam; PR00109; PRXRINASE.

R ROSITE; PR00109; PROTEIN KINASE ATP; 1.

R ROSITE; PR00109; PROTEIN KINASE ATP; 1.

R ROSITE; PR00109; PROTEIN KINASE TYR; 1.

R ROSITE; PR00109; PROTEIN KINASE TYR; 1.

R R ROSITE; PR00109; PROTEIN KINASE TYR; 1.

R RPCSITE; PR00109; PROTEIN KINASE TYR; 1.

R RPCSITE; PR00109; PROTEIN KINASE TYR; 1.

R R RTP-LAING RESEARES TYR; 1.

R RAFFIRES RESOULS TREASE TYR; 1.

R RTP-LAING RESEARES TYR; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Canis familiaris (Dog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Carnivora, Fissipedia, Canidae, Canis.
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Last sequence update)
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Submitted (OCT-1997) to the
EMBL; AB008451; BAA23127.1;
HSSP; P04626; 1N8Z.
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1; Mismatches
                                                                  Score 6688;
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Matches 1230; Conserv
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1163 GATLERPKTLSPKTLSPGKNGVVXDVPAFGSAVENPEYLAPRGRAAPQPHPPPAFSPAFD 1222
      103 QDPSPLQRYSEDPTVPLPPETDGKVAPLTCSPQPEYVNQPEVWPQPPLALEGPLPPSRPA 1162
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                                                 GATLER----AKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFD
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STRAIN=BDIX;
Watson P.A., Kim K., Chen K.-S., Gould M.N.;
Watson P.A., May P.

BEMBL; AVI16182; AAM50093.1; -.

RHSP; PO6494; NPT Dinding; IEA.
GO; GO:0005524; F:ATP Dinding; IEA.
GO; GO:0005524; F:ATP Dinding; IEA.
GO; GO:0005506; F:Espidermal growth factor receptor activity; IEA.
GO; GO:000566; F:Papidermal growth factor receptor activity; IEA.
GO; GO:0006468; P:protein amino acid phosphorylation; IEA.
GO; GO:000468; P:protein amino acid phosphorylation; IEA.
GO; GO:000468; P:Pransmembrane receptor protein tyrosine kin. . .; I
RICEPPO; IPRO02494; BGPR.
InterPro; IPRO0494; BCPR.
InterPro; IPRO0494; BCPR.
InterPro; IPRO0494; Pruin_repeat.
InterPro; IPRO0199; Kinase like.
InterPro; IPRO0199; Kinase like.
InterPro; IPRO0199; YLP_motif.
IR INTERPRO; IPRO0199; YLP_motif.
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
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Last sequence update)
Last annotation update)
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Pred. No. 7.8e-299;
50; Mismatches 97;
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88.0%;
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01-OCT-2002 (TrEMBLrel. 22,
01-MAR-2004 (TrEMBLrel. 26,
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Matches 1085; Conservative
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Rattus norvegicus (Rat)
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                                                                                      SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
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MALUNE=2388257; PubMed=12477932;

MALUNE=2288257; PubMed=12477932;

MALUNE=2288282; MALUNE=2., Submed=1., Wang J., Haich F.,

MALUNE M., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

MALUNE M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

MALUNE M., Marusina K., Parmer A.A., Rubin G.M., Gary L.J., Mullahy S.J.,

MALUNE M., McMann P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

MALUNE M., Madan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

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MALUNE M., Madan A., Young M.C., Shevchenko Y., Schein J.E.,

MALUNE M., Madan A., Young M.C., Shevchenko Y., Schein J.E.,

MALUNE M., Madan M., M.J.,

MALUNE M., M.M. M.M., M.M.,
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Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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Strausberg R.;

Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.

R Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.

R InterPro; IPR000446; EF-hand.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000494; EGFR_L.

R InterPro; IPR000512; Furin_like.

R InterPro; IPR000130; Grow_Fac_recept.

R InterPro; IPR000130; Grow_Fac_recept.

R InterPro; IPR000130; Grow_Fac_recept.

R InterPro; IPR000130; Grow_Fac_recept.

R InterPro; IPR0001245; Tyr_Dkinase.

R InterPro; IPR001245; Tyr_Dkinase.

R InterPro; IPR001245; Tyr_Dkinase.

R InterPro; IPR00129; Eurin_like; 1.

R Pfam; PR00057; Furin_like; 1.

R Pfam; PR001057; Furin_like; 1.

R Pfam; PR00109; Prock kinase; 1.

R SMART; SM00219; TyrKINASE.

R SMART; SM00219; TyrKc; 1.

R SMART; SM00219; TyrKc; 1.

R PROSITE; PS00107; PROTEIN_KINASE_TYR; 1.
                                                                                                                                                                                   05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             THDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGATLERAKTLS PGKNGVVKDVFAFGGAVENPEYLT PQGGAAPQPHPPPAFS PAFDNLYY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGS
                                                                                              RCWGESSEDCOSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSG
                                                                                                                                                                                      ICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNOEV
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TISSUE=Prostate;

X. TISSUE=Prostate;

X. Strausberg R.L., Febigoid E.A., Grouse L.H., Derge J.G.,

X. Strausberg R.L., Febigoid E.A., Grouse L.H., Derge J.G.,

X. Altascher R.D., Collins F.S., Wagner L., Schemen C.M., Schuler G.D.,

R. Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Donaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

RA Sichards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R. Wichards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R. Wichards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R. Wilting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

R. Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,

R. Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,

R. Adriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

R. Jones S.J., Marra M.A.;

R. Jones S.J., Marra M.A.;

R. McGeneration and initial analysis of more than 15,000 full-length human
                       AHRRHRSSSTRSGGGELTLGLEPSEEGPPRSPLAPSEGAGSDVFDGDLAMGVTKGLQSLS
                                                                                   1080 THDPSPLORYSEDPTVPLPSETDGYVAPLTCSPOPEYVNOPDVRPOPPSPREGPLPAARP
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                                                                                                                1107 PHDLSPLORYSEDPTLPLPPETDGYVAPLACSPOPEXVNOSEVOPOPPLTPEGPLPPVRP
                                                                                                                                                                                                           AGATLERPKTLSPGKNGVVXDVFAFGGAVENPEYLVPREGTASPPHPSPAFSPAFDNLYY
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                                                                                                                                                                                 AGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
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02-WAR-2004 (TrEMBLrel. 27, Last sequence update)
02-WAR-2004 (TrEMBLrel. 27, Last annotation update)
V-erb-b2 erythroblastic leukemia viral oncogene homolog 2.
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Pred. No. 1.3e-298;
0; Mismatches 98; Indels
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SEQUENCE 1259 AA; 139071 MW; 10746819C22BE802 CRC64;
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Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                  WDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
                                                                                                                                                                                                                                                                                                                                                                                                                                        1259 AA.
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87.9%;
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Matches 1084; Conservative
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                                                                                                                                                                                                  VLIAHNOVROVPLORLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVT-GASPGGLRELQL
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                                                                                                         QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
                                                                Gaps
                                                              1,
                Length 1259,
                                                           Indels
                   DB 2;
                                                                98;
              Score 5895.5; DB 2
Pred. No. 1.3e-298;
50; Mismatches 98;
              88.1%;
87.9%;
                                                           Conservative
                                      Similarity
           Query Match
Best Local Simil
Matches 1084; C
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TRUCTURE BY NAWR OF 650-668.

TRUCTURE BY NAWR OF 650-668.

MEDINES-92155181; PubMed=1346763;

MEDINES-92155181; PubMed=1346763;

MEDINES-92155181; PubMed=1346763;

A Gullick W.J., Bottomley A.C., Lofts F.J., Doak D.G., Mulvey D.,

A Newman R., Crumpton M.J., Sternberg M.J.E., Campbell I.D.;

Three dimensional structure of the transmembrane region of the proto-

Three dimensional structure of the new protein.";

EMBO J. 11:43-4811992).

-1- FUNCTION: Essential component of a newregulin-receptor complex,

althought newregulins do not interact with it alone. GP30 is a

potential ligand for this receptor. Not activated by EGF, TGF-

alpha and amphiregulin.

-1- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein

tyrosine phosphate.

-1- CATALYTIC Heterodimer with each of the other ERBB receptors. The

constitutively activated oncogenic variant forms a homodimer.

-1- SUBCELLULAR LOCATION: Type I membrane protein.

-1- FPM: Ligand-binding increases phosphorylation on tyrosine residues
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                                                                                                                                                                                                                                                                                                                                                                                                        growth factor receptor-related
                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                               01-JAN-1988 (Rel. 06, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Receptor protein-tyrosine kinase erbB-2 precursor (EC 2.7.1.112)
(p185erbB2) (NEW proto-oncogene) (C-erbB-2) (Epidermal growth factor receptor-related protein).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-SCIATION DETVE;
MEDLINE=91222560; PubMed=2025425;
Lai C., Lemke G.;
"An extended family of protein-tyrosine kinase genes differentially expressed in the vertebrate nervous system.";
Neuron 6:691-704(1991).
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"The neu oncogene encodes an epidermal
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PIR; A24562; TVRTNU.
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InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin_repeat.
                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=86118662; PubMed=3945311;
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PDB; 111J; NMR; A=647-681.
PDB; 1N8Y; X-ray; C=23-631.
RGD; 2561; Erbb2.
                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 319:226-230(1986)
                                                                                                                                                                                                                                                     Rattus norvegicus (Rat)
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TISSUE=Neuroblastoma;
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InterPro; IPR000030; Grow fac recept.

R InterPro; IPR001009; Kinage like.

R InterPro; IPR001245; Tyrc Kinage.

R InterPro; IPR001245; Tyrc Kinage.

R InterPro; IPR001245; Tyrc Kinage.

R InterPro; IPR001245; Tyr pkinage.

R InterPro; IPR001245; Tyr pkinage.

R InterPro; IPR001245; Tyr pkinage.

R Ffam; PF00109; Pkinage; 1.

R Prolom; PF00109; Pkinage; 1.

R PR01017; Pkinage; 1.

R PR0117; Pkinage; 1.

R Pkinage; 
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N-linked (GLNAc. .) (Potential).
N-linked (GLCNAc. .) (Potential).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CRC64;
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Extracellular (Potential).

Cytoplasmic (Potential).

Cys-rich.

Cys-rich.

Cys-rich.

Cys-rich.

Typ (By similarity).

By similarity.

By similarity.
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138831 MW; 6129264583011402 CRC6
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Matches 1085; Conservative
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1164 PAGATLERPKTLSPGKNGVVKDVFAFGGAVENDEYLVPREGTASPPHPSPAFSBAFDNLY 1223
                                                                                                                                                                                                                                                                                                                                                           MEDLINE=94193007; PubMed=7908275;
Nakamura T., Ushijima T., Ishizaka Y., Nagao M., Arai M., Yamazaki Y.,
Ishikawa T.;
                                                                                                                                                                                                                                                                                                                                                                                                        "Cloning and activation of the Syrian hamster neu proto-oncogene.", Gene 140:251-255(1994).

-!- FUNCTION: Essential component of a neuregulin-receptor complex, althought neuregulins do not interact with it alone. GP30 is a potential ligand for this receptor. Not activated by EGF, TGF-alpha and amphiregulin (98 similarity).

-!- CATALYTIC ACTIVITY: ATP + a protein tyrosine = ADP + protein
                                                                                                                                                             15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
05-JUL-2004 (Rel. 44, Last annotation update)
Receptor protein-tyrosine kinase erbb-2 precursor (EC 2.7.1.112)
(pl85erbB2) (NEU proto-oncogene) (C-erbb-2).
Mame=ERBB2; Syronoyms=NEU;
Mame=ERBB2; Syronoyms=NEU;
MameSocricetus auratus (Golden hamster).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SUBUNIT: Hererodimer with each of the other ERBB receptors (Potential). Interacts with PRKCABP (By similarity). -!- SUBCELLULAR LOCATION: Type I membrane protein. -!- PTM: Ligand-binding increases phosphorylation on tyrosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           residues.
-!- SIMILARITY: Belongs to the EGF receptor family.
                                         YWDQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
                                                        1224 YWDQNSSEQGPPPSNFEGTPTAENPEYLGLDVPV 1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SMART; SM00261; FU; 4.
SMART; SM00219; TYFKC; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR00611; Furin-like.
InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin-repeat.
InterPro; IPR009030; Grow fac recept.
InterPro; IPR01009; Kinase like.
InterPro; IPR001719; Prot Kinase.
InterPro; IPR001245; Try_Ekinase.
InterPro; IPR008266; Try_Ekinase.
InterPro; IPR008266; Try_Ekinase.
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ProDom; PD000001; Prot kinase; 1.
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Pfam; PF02757; YLP; 2.
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Pfam; PF00069; Pkinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; D16295; BAA03801.1; -. PIR; 148161; 148161.
HSSP; P06494; 1N8Y.
                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tyrosine phosphate.
                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. TISSUE=Nerve;
                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                              Mesocricetus
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61 VLIAHNOVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR 120
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                                                                                                           Receptor protein-tyrosine kinase erbB-2.
Extracellular (Potential).
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(Potential).
(Potential).
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PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE: PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Disease mutation; dlycoprotein; Multigene family;
Phosphorylation; Prote-oncogene; Receptor; Signal; Transferase;
Transmembrane; Tyrosine-protein kinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1254;
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59 V -> E (in oncogenic NEU).
138252 MW; 974C3791C21F2BE1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-linked (GlCNAc...) (N-linked (GlCNAc...)
                                                                                                                                                          Cytoplasmic (Potential)
Cys-rich.
Cys-rich.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
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ATP (By similarity).

By similarity.

By similarity.
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57; Mismatches 93;
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                                                                                          Potential.
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TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFD 359
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EMBL, AK12487; BAC98297.1; -. BRC, GO: GOOT925.2; P: Pereir development; IMP.

EMBL, AK12487; BAC98297.1; -. BRC, GO: GOOT925.2; P: Pereir development; IMP.

GO; GO: 0007422; P: Pereir development; IMP.

InterPro; IRR006211; Furin. repeat.

InterPro; IRR006212; Furin repeat.

InterPro; IRR001093; Kinase like.

InterPro; IRR001093; Kinase like.

InterPro; IRR001245; Tyr_pkinase.

InterPro; IRR001245; Tyr_pkinase.

InterPro; IRR001093; Ruina.like.

InterPro; IRR001093; Ruinase.

INTERPRO; PR01039; Ruinase.

INTERPRO; IRR001093; Ruinase.

INTERPRO; IRR001094; Ruinase.
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                                                                 Craniata, Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87.8%; Score 5877.5; DB 2;
87.6%; Pred. No. 1.1e-297;
ive 56; Mismatches 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMART; SM00261; FU; 4.
SMART; SM00220; S. TKC; 1.
SMART; SM00219; TYKC; 1.
PROSITE; PS00107; PROTEIN KINASE ATP; 1.
PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Kinase; Transferase.
                                         Mus musculus (Mouse).
Eukaryota, Metazoa, Chordata;
Mammalia, Eutheria; Rodentia;
protein (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 87.6 Matches 1080; Conservative
                                                                                                                                                            SEQUENCE FROM N.A.
TISSUE=Embryonic tail;
PubMed=14621295;
                                                                                                             NCBI_TaxID=10090;
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                                                           TISSUE-Embryonic tail;
Okazaki N., Kikuno R., Ohara R., Inamoto S., Koseki H., Hiraoka S.,
Okazaki N., Kikuno R., Ohara O., Koga H.;
"Prediction of the Coding Sequences of Mouse Homologues of KIAA Gene
III. The Complete Nucleotide Sequences of 500 Mouse KIAA-homologous
CONAS Identified by Screening of Terminal Sequences of cDNA Clones
Randomly Sampled from Size-fractionated Libraries.";
DNA Res. 10:167-180(2003).
  Chordata, Craniata, Vertebrata, Buteleostomi, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                             Length 1305
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Pred. No. 1.1e-297;
6; Mismatches 96;
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Mammalia; Eutheria;
NCBI_TaxID=10090;
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BAC98297,
02-MAR-2004 (TrEMBLrel. 27, Cr
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MXIAA3033 protein (Fragment).
MMS musculus (Mouse).
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 13 days embryo male testis cDNA, RIKEN full-length
enriched library, clone:6030449F08 product:v-erb-b2 erythroblastic
leukemia viral oncogene homolog 2, neuro/glioblastoma derived oncogene
homolog (avian), full insert sequence. (Fragment).
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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MEDLINE=99279253; PubMed=10349636;
Carninci P., Hayashizaki Y.;
High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
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MEDLINE=21085660; PubMed=11217851;
RIKEN FANTOM Consortium;
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MEDLINE=20499774; PubMed=11042159;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
"Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
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STRAIN=CS7BL/GJ; TISSUE=Testis;
STRAIN=CS7BL/GJ; TISSUE=Testis;
A Adachi J., Alzawa K., Akimura T., Hara A., Hashizume W.,
A Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
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A Tagawa A., Takhashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
A Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUB=Testis;
MEDLINE=2530913; PubMed=11076861;
MEDLINE=2530913; PubMed=11076861;
Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamanoto R., Matsunoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Yoneda Y., Ishikawa T., Cogawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; "RIKEN integrated Sequence analysis (RISA) system-384-format Genome Res. 10:1757-1771(2000).
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RGO; GO:0004552; P:heart development; IMP.

RGO; GO:0004552; P:myelination; IMP.

RGO; GO:0007422; P:myelination; IMP.

RINterPro; IPR000494; EGFR_L.

RINterPro; IPR000512; Furin repeat.

RINterPro; IPR0006212; Furin repeat.

RINterPro; IPR009030; Grow_Eorcept.

RINterPro; IPR001093; Kinase like.

RINterPro; IPR001245; Tyr_Dkinase.

RINterPro; IPR008266; Tyr_Dkinase.

RINterPro; IPR008266; Tyr_Dkinase_AS.

RINterPro; IPR009304; YlyP_Montif.
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PROSITE; PS50011; PROTEIN KINASE DOM; 1.
PROSITE; PS00109; PROTEIN KINASE TYR; 1.
ATP-binding; Kinase; Transferase; Tyrosine-protein kinase.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62.8%; Score 4207; DB 2;
88.1%; Pred. No. 7.3e-211;
ive 40; Mismatches 65;
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ProDom; PD000001; Prot_kinase; 1.
SMART; SM00261; FU; 2.
SMART; SM00219; TYFKC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L domain; 1.
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121 SLTBILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTWRS-RACHPCSPMCKGS 179
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .; IEA.
                       Earp H.S.; "A truncated, secreted form of the epidermal growth factor receptor is encoded by an alternatively spliced transcript in normal rat tissue."; Mol. Cell. Biol. 10:2973-2982(1990).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              139 NLOEILIGAVRFSNNPILCNMETIQWRDIV-ODVFLSNMSMDVQRHLTGCPKCDPSCPNG
                                                                                                                                                                                                                                                                                                        NEEL, MAJ294; AAR1910 to the EMBL/Genbank/Dubu Gatabases.

REL; A36325; A36325.

REL; A36325; A36325.

RESE; G912629; IMIT.

GO; GO:0016620; C:membrane; IEA.

GO; GO:0016520; F:ATP binding; IEA.

GO; GO:0005524; F:ATP binding; IEA.

GO; GO:0005506; F:epidermal growth factor receptor activity; IEA.

GO; GO:0005006; F:epidermal growth factor receptor activity; IEA.

GO; GO:0006108; F:epidermal growth factor receptor activity; IEA.

GO; GO:0006118; F:epidermal growth factor receptor activity; IEA.

GO; GO:0006118; P:electron transport; IEA.

GO; GO:0006118; P:electron transport; IEA.

GO; GO:0006118; P:protein amino acid phosphorylation; IEA.

InterPro; IPR000450; 4F48FE.

InterPro; IPR000415; Furin repeat.

InterPro; IPR000109; Kinase.

InterPro; IPR000109; Kinase.

InterPro; IPR000109; Kinase.

InterPro; IPR000309; Prinase.

InterPro; IPR000309; Prinase.

InterPro; IPR000309; Prinase.

InterPro; IPR000109; Prot. Kinase.

InterPro; IPR000109; Prinase.

InterP
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SMART; SM00261; FU; 4.

SMART; SM00219; TyrKc; 1.

PROSITE; PS001107; PROTEIN KINASE APP; 1.

PROSITE; PS001107; PROTEIN KINASE DOM; 1.

PROSITE; PS001109; PROTEIN KINASE TYR; 1.

PROSITE; PS001109; PROTEIN KINASE TYR; 1.

ATP-binding; Kinase; Receptor; Transferase; Tyrosine-protein kinase.

SEQUENCE 1209 AA; 134890 MW; 96FEETF6CC1B7773 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47.2%; Score 3160.5; DB 2; Length 1209; llarity 50.5%; Pred. No. 3.4e-156; Conservative 167; Mismatches 349; Indels 105;
    Petch L.A., Harris J., Raymond V.W., Blasband A.J., Lee D.C.
                                                                                                                                                                                                                                                                        Petch L.A.;
Submitted (NOV-1991) to the EMBL/GenBank/DDBJ databases.
                                                                                                                           SEQUENCE FROM N.A.
STRANT=Fisher; TISSUE-Liver;
Guttridge, V. Dawson T.L., Earp H.S.;
Submitted (NOV-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                               SEQUENCE FROM N.A.
STRAIN=Fisher; TISSUE=Liver;
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Best Local
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                                                                                    541 LMTFGAKPYDGIPAREIPDLLEKGERLPOPPICTIDVYMIMVKCWMIDSECRPRFRELVS 600
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                                                                                                                                                                      181 VRGKHCLPCHPECQPQNSSETCYGSEADQCEACAHYKDSSSCVARCPSGVKPDLSYMPIW
                                                                                                                                                                                                                                                                                                               652 IKRROOKIRKYTMRRILIOETELVEPLTPSGAMPNQAOMRILKETELRKVKVLGSGAFGTV
                                                                                                                                                                                                                                                                                                                                    532 VNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIW
                                                                                                                                                                                                                               KPPDEEGACOPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGIL
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                                                              HTANRPEDECVGEGLACHQLCARGHCWGPPTQCVNCSQFLRGQECVEECRVLQGLPREY
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Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
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01-MAY-2000 (TrEWBLrel. 13, Created)
01-MAY-2000 (TrEWBLrel. 13, Last sequence update)
01-MAR-2004 (TrEWBLrel. 26, Last annotation update)
Epidermal growth factor receptor.
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STRAIN-Fisher; TISSUE-Liver;
MEDLINE-90258888; PubMed-2342466;
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SEQUENCE FROM N.A.

STRAIN=C57BL/6; TISSUE=Brain;

MEDLINE=22388257; PubMed=1247932;

MEDLINE=22388257; PubMed=1247932;

MEDLINE=22388257; PubMed=1247932;

MEDLINE=22388257; PubMed=1247932;

MAISCHUI S.F., Zebeberg B., Buercow K.H., Schemen C.M., Schuler G.D.,

Altschul S.F., Zebeberg B., Buercow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Mang J., Heishe F.,

Biatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M., Soares M.B., Bonaldo M.F., Casrainci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Brownstein M.J., Wochlywki S., Carninci P., Prange C.,

Raba S.S., MocMan P.J., McKernan R.J., Malek J.A., Gunarathe P.H.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Pahey J., Helton E., Ketteman M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Mitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

M. Jones S.J., Marra M.A.,

Jones S.J., Marra M.A.,

The Man A., Schmutz J., Myers R.M., Schein J.E.,

Jones S.J., Marra M.A.,

Jones S.J., Marra M.B.,

Jones S.J., Marra M.B.,

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                                                                                                               Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD; MGI:95410; Erbb2.
GO; GO:0007507; P:heart development; IMP.
GO; GO:0007527; P:heart development; IMP.
GO; GO:0007422; P:myelination; IMP.
InterPro; IPR000494; EGPR_L.
InterPro; IPR006211; Furin-like.
InterPro; IPR006212; Furin-repeat.
InterPro; IPR009303; Grow Fac_recept.
Pfam; PF00757; Furin-like; 1.
Pfam; PF00757; Rurin-like; 1.
Pfam; PF00757; Rurin-like; 1.
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Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.
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  Created)
Last sequence update)
Last annotation update)
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EMBL; BC053078; AAH53078.1;
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es 569; Conservative
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  01-JUN-2003 (TrEMBLrel.
01-JUN-2003 (TrEMBLrel.
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                                                                    Erbb2 protein.
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                                                                                              Name=Erbb2;
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                          VTAEDGTQRCEXCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESF
                                                                                                               V-EEDGVSKCKKCDGPCRKVCNGIGIGEFKDTLSINATNIKHFKYCTAISGDLHILPVAF
                                                                                                                                                                             DGDPASNTAPLQPEQLOVETLEEITGYLYISAWPDSLPDLSVFONLQVIRGRILHNGAY
                                                                                                                                                                                                         377 KGDSFTRTPPLDPRELEILKTVKEITGFLLIQAWPENWTDLHAFENLEIIRGRTKQHGQF
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GICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQE
                                                                                                                                                                                                                                                                       SITLOGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPE
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MEDLINE=84219729; PubMed=6328312;
Ulfrich A., Coussens L., Hayflick J.S., Dull T.J., Gray A., Tam A.W.,
Lee J., Yarden Y., Libermann T.A., Schlessinger J., Downward J.,
Mayes B.L.V., Whittle N., Waterfield M.D., Seeburg P.H.;
"Human epidermal growth factor receptor cDNA sequence and aberrant
expression of the amplified gene in A431 epidermoid carcinoma cells.";
RSLTEILKGGVLIRGNPQLCYQDMVLWKDVLRKNNQLAPVDMDTNRSRACPPCAPTCKDN
                               204 HCWGESPEDCQILTGTICTSGCARCKGRLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSG
                                                                                                       TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFD
                                                                                                                    GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQNLQVIRGRILHNGAYS
                                                                                                                                                            LTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPED
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                                                                                                                                                                                                                                                  504 ACGLEGLVCNSLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVWKGLPREYVRGKHCLP
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                                                                                                                                                                                                                                                                                            CHPECQPQNSSETCYGSEADQCEACAHYKDSSSCVARCPSGVKPDLSYMPIWKYPDEEGI
                                                                                                                                                                                                                                                                                                                        COPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGILIKRRQQKI
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                                                             240 ICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEV
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Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ilekis J.V., Stark B.C., Scoccia B.; "Possible role of variant RNA transcripts in the regulation of epidermal growth factor receptor expression in human placenta.";
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Mammalia; Eutheria; Primates;
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                                                                                                                                                                                                                                                                                                                                                                 RKYTMRRLLQETEL 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Name=EGFR; Synonyms=ERBB1
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SEQUENCE FROM N.A. (ISOFORM 1), AND VARIANTS GLN-98; ARG-266; LYS-521; ILE-674; GLY-962 AND PRO-988.

Livingston R.J., Rieder M.J., Chung M.-W., Ritchie T.K., Olson A.N., Nguyen C.P., Nguyen D.A., Poel C.L., Robertson P.D., Schackwitz W.S., Sherwood J.K., Sherwood A.M., Leithauser B.J., Nickerson D.A.; Parlyronnental genome project, NIERE SE15478, Department of Genome Sciences, Scattle, WA (WEL: http://egp.gs.washington.edu).", Submitted (APR-2004) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=21100872; PubMed=11161793; DOI=10.1006/geno.2000.6341; Reiter J.L., Threadgill D.W., Elby G.D., Strunk K.E., Danielsen A.J., Schehl Sinclair C., Pearsall R.S., Green P.J., Yee D., Lampland A.L., Balasubramaniam S., Crossley T.D., Magnuson T.R., James C.D.,
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Db 89 VLIALNTVERIPLENLQIIRGNMYYENSYALAVLSNYDANKTGLKELPMR 1 Qy: 121 SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR 1	OY 181 CWGESSEDCOSLTRIVCAGGCA-RCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSG 2 D 199 CWGAGEBNCQKLTKIICAQQCSGRCRGKSPSDCCHNQCAAGCTGPRESDCLVCRKFRDEA 2	Qy 240 ICELHCPALVTYNIDIFESMPNPBGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEV 2 1	Qy 300 TABDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSLAFLPESFD 3 19 -EBDGVRKKKGGPCRKVCNGIGIGEFKDSLSINATNIKHFKNCTSISGDLHILPVAFR 3	Qy 360 GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQNLQVIRGRILHNGAYS 4	QY 420 LTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPED 4	QY 480 ECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP 5	OY 540 CHPECQPONGSVTCFGFBADQCVACAHYKDPFFCVARCPSGVKFDLSYMPIWKFPDEEGA 5	QY 600 CQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLGVVFGILIKRRQ 6	Oy 657 QKIRKYTMRRLLQETELVBPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGIW 7 	Qy 717 IPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVQLVTQ 7	OY 777 IMPYGCLLDHVRENRGRLGSQDLLMWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHV 8	Qy 837 KITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFG 8 1	QY 897 AKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRM 9 12 SKPYDGIPASEISSILEKGERLPQPPICTIDVYMIMVKCWMIDADSRPKFRELIIEFSKM 9	QY 957 ARDPQREVVIQ-NEDLGPASPLDSTFYRSLLEDDDMGDLVDAEBYLVPQQGFFCPDPAPG 1	Qy 1016 AGGMVHHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGL 1 : : Db 1025SSPSTSRTPLLSSLATSNNSTVACIDRNGL 1	Qy 1076 QSLPTHDPSPLQRYSBDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPRBGP 1	QY 1134 LPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENPEYL-TPQGGAAPQPHPPPAFSP 1 Db 1109 VYHNQPLNPPTSRDPHYQDPHSTAVGNPEYLNTVQPTCVNS 1
Db 672 HIVRKRTLRRLLQERELVEPLTPSGEAPNOALLRILKETEFKKIKVLGSGAFGTVYKGLW 731 Qy 717 IPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYVSRLLGICLTSTVOLVTQ 776	Qy 777 LMPYGCLLDHVRENRGRLGSQDLLMWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHV 836	Oy 837 KITDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSDVMSYGVTVWELMTFG 896	QY 897 AKPYDGIPAREIPDLLEKGERLPOPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRM 956	OY 957 ARDPORFWVIQ-NEDLGFASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPG 1015	OY 1016 AGGWVHHRHRSSSTRSGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGL 1075	Qy 1076 QSLPTHDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGP 1133	OY 1134 LPAARPAGATLERAKTLSPGKNGVVKDVFAFGGAVENBEYL-TPQGGAAPQPHPPAFSP 1192 1109 VYHNQPLNPAPSRDFHYQDPHSTAVGNFEYLNTVQPTCVNS 1149	QY 1193 AFDNLYYWDQDPPERGAPPSTFKGTPTAENPEYL 1226 DD 1150 TFDSPAHWAQKGSHQISLDNPDYQQDFFFKEAKPNGIFKGS-TAENAEYL 1198	SUL S83	AC AAS83109; DT 14-ARR-2004 (TrEMBLrel. 27, Created) DT 14-ARR-2004 (TrEMBLrel. 27, Last sequence update) DT 14-ARR-2004 (TrEMBLrel. 27, Last annotation update)		OS Homo sapiens (Human). OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; OC Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. OX NCBI_TaxID=9606;	0,50		Duery Match 47.1%; Score 3155; DB 2; I Bet Local Similarity 49.9%; Pred. No. 6.6e-156; Artche 624. Conservative 177. Miematchee 345.	1 QVCTGTDMKLRLPASPETHLDMLRHLYQGQVVQGNLELTYLPTNASLSFLQDIQEVQGY 6	61 VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLANTTPVTGASPGGLRELQLR


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                                                                                                                                                                                                                                                                                                                                                                     Pram; Pro0069; Pkinase; I.
Pram; Pro0069; Pkinase; I.
Pram; Pro0009; TYRKINASE.
PRINTS; PR00109; TYRKINASE.
SWART; SM00261; FU; 5.
SWART; SM00219; TYFKC; I.
SWART; SM00219; TYFKC; I.
PROSITE; PS00107; PROTEIN KINASE ATP; I.
PROSITE; PS00107; PROTEIN KINASE TYP; I.
PROSITE; PS00109; PROTEIN KINASE TYP; I.
PROSITE; PS00109; PROTEIN KINASE TYP; I.
ATP-binding; Kinase; Receptor; Transferase; Tyrosine-protein kinase.
SEQUENCE 1209 AA; 133531 MW; 268E3FB11E36F90F CRC64;
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                                                                                                                              Euteleostomi;
Sus.
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GO:0005524; F:ATP binding; IEA.
GO:0005006; F:epidermal growth factor receptor activity; IEA.
GO:0004872; F:receptor activity; IEA.
GO:0016440; F:transferage activity; IEA.
GO:0006468; P:protein amino acid phosphorylation; IEA.
GO:0001169; P:transmembrane receptor protein tyrosine kin..
        DB 2; Length 1209;
----PERGAPPSTFKGTPTAENPEYL
                                                                                                                                                                      01-0CT-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Epidermal growth factor receptor.
Sus scrofa (Pig).
Bukaryota, Merazoa, Chordata, Craniata, Vertebrata,
Mammalia, Eutheria, Cetartiodactyla, Suina, Suidae;
NCBI_TAXID=9923;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 47.0%; Score 3143.5; DB 2; Best Local Similarity 50.1%; Pred. No. 2.6e-155; Matches 625; Conservative 178; Mismatches 344;
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                                                               PRELIMINARY;
AFDNLYYWDQ-
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DPQRFVVIQ-NEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAG 1017
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            839 TDFGLARLLDIDETEYHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAK 898
                                                                                                                         378 GDSFTRTPPLDPKELDILKTVKEITGFLLIQAWPENRTGLHAFENLEIIRGRTKQHGQFS 437
                                                                                                                                                                                                                                                                                           LTLQGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWDQLFRNPHQALLHTANRPED 479
                                                                                                                                                                                                                                                                                                                     COPCPINCTHSCVDLDDKGCPAEORASPLTSIVSAVV-GILLVVVLGVVFGILIKRROOK 658
                      ECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYVNARHCLP
                                                                                                                                                                                                                                                                                                                                                                                                                   CHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGA
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                                                                                                                                                                                              GDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLSVFQNLQVIRGRILHNGAYS
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                                                                                             TAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQEFAGCKKIFGSI
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Human kin
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Human kin
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                        Abr82066 RAGC09593 Adc09593 Ade65281 Ade76190 Adf45048 Adf190083 Adf190083 Add17193 Adm12582 
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|label= insertion_region
|note= "sultable For foreign epitope insertion"
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/label= insertion_region
/note= "suitable For foreign epitope insertion"
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/label= insertion region
/note= "suitable For foreign epitope insertion"
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[Jabel= insertion region
] Anote= "suitable for foreign epitope insertion"
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                                                                          ADD25484
ADE63281
ADE763281
ADE763281
ADF76554
ADJ66554
ADJ66554
ADJ7193
ADM312582
ADM312582
AAM31268
AAM21208
AAM21109
AAM51114
AAM51109
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/label= N-terminal
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Homo sapiens
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                      GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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/note= "sultable for foreign epitope insertion"
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                                                                                                          24 QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
                                                                                                                                                                       61 VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                                                                                                                                                                                                                                                           SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
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    Length 1255;
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Score 6694; I
Pred. No. 0;
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Query Match
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Matches 1232; Conservative 0;
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  VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention provides a method of treating cancer by administering a conjugate of anti-ErbB antibody with a maytansinoid. In particular, the antibody is directed against ErbB2 (also known as HER2 and p185ens). The method is particularly useful in the treatment of breast, ovarian, stomach, endometrial, salivary gland, lung, kidney, colon, colorectal, thyroid, pancreatic, prostate and bladder cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ErbB
                                                                                                         GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPAFSPAFDNLYYW
               HHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                                                   HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEXVNQPDVRPQPPSFREGPLPAARPA
                                                                       HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPSTVNQPDVRPQPPSPREGPLPAARPA
                                                                                                                         GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Treating tumors, particularly breast cancers, which overexpress ar receptor and does not respond to an anti-ErbB antibody, comprises conjugating the antibody to a maytansinoid.
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                                                                                                                                                                                                                                                                                                                                                                       Human; HER2; ErbB2 receptor; p185neu; maytansinoid conjugate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1255;
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llarity 100.0%; Pred. No. 0;
Conservative 0; Mismatches
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                                                                                                                                                                                                                                                           protein; 1255
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16-MAR-2000; 2000US-0189844P.
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Best Local Similarity
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                          VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                                           84 VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                                                                                   SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
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QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel synthetic therapeutic compound for inducing immune response and use in adoptive immunotherapy, has enhanced binding to major histocompatibility molecules and enhanced immunoregulatory properties.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
 Gapa
                                                                                                                                                                                                                                                         Therapeutic compound; major histocompatibility complex; vaccine; antigenic peptide; MHC; immunoregulatory; immune response; HER-2; adoptive immunotherapy; anti-cancer; breast cancer antigen; APC; antigen presenting cell; human; tyrosine kinase-type receptor.
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                                                                                                                                                                                                                                   Human tyrosine kinase-type receptor, HER-2.
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/note= "Antigenic epitope"
                                               DODPPERGAPPSTFKGTPTAENPEYLGLDVPV
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                                                                                                                                                 protein; 1255
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N-PSDB; AAD19731.
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                     SLTEILKGGVLIGRNPQLCYQDTILWXDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        netive human HER2 protein in its mammal produces detectable levels of a native human HER2 protein in its mammary gland cells, useful as tumor models for testing HER2-directed cancer therapies, and for identifying anticancer agents.
GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPOPHPPPAFSPAFDNLYYW
                GATLERAKTLSPGKNGVVKOVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
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ive 0; Mismatches
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N-PSDB; AAD43934, AAD43935.
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SCHWALL R.
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QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
                           VLIAHNQVRQVPLQRLRIVRGTQLFEDNYALAVLDNGDPLNNTTPVTGASPGGLRELQLR
                                          SLTBILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a method for inducing or enhancing an immune response against a polypeptide antigen in an animal, including human. The method comprises administering the polypeptide antigen or at least one variant which includes it least one first T-helper cell epitope that is foreign to the animal (foreign TH epitope) and is formulated with chitosan. The polypeptide antigen is weakly immunogenic or non-immunogenic. The invention is used as vaccine. The chitosan and polypeptide antigen or its variant are useful in the preparation of an immunogenic composition for inducing or enhancing an immune response, particularly CTL response, against the polypeptide or protein antigen. The method for inducing or enhancing an immune response is useful in treating or ameliorating concer, e.g. prostate or breast cancer. The present sequence is human Herz antigen
                                                                                                                                                                                               Human; immune response; T-helper cell epitope; chitosan; CTL response;
vaccine; prostate cancer; breast cancer; Her2 antigen; cytostatic;
immunostimulant.
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                                                                                                                                                                                                                          Human; HER2; ErbB; epidermal growth factor receptor; receptor; anti-ErbB antibody-maytansinoid conjugate; cancer; tumour; breast; ovary; stomach; endometrium; salivary gland; lung; kidney; colon; colorectum; thyroid; pancreas; prostate; bladder; ErbB2; neuronal disorder; glial disorder; astrocytal disorder; hypothalamic disorder; glandular disorder; stromal disorder; stromal disorder; inmunological disorder; inflammatory disorder; angiogenic disorder; inflammatory disorder;
                      GATLERAKTLSPGKNGVVKDVFAFGGAVENPRYLTPQGGAAPQPHPPPAFSPAFDNLYYW
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receptor, ErbB or cancer in mammal, comprises administering anti-ErbB
antibody-maytansinoid conjugate to the mammal.
                                                     DODPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
                                                                 Sliwkowski M;
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SLIWKOWSKI M.
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N-PSDB; ABK14058.
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                                                                                                    The present invention describes a method for assessing whether a patient is afflicted with breast cancer. The method comprises comparing the level of expression of a marker (gene/polypeptide see AC50076 to AC50334 and ABR47386 to ABR47632) in a patient sample and the normal level of expression of the marker in a control non-breast cancer sample, where a significant increase in the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with breast cancer. The breast cancer associated sequences from the present invention have cytostatic activities and can be used in gene therapy. The method is useful for diagnosing and treating breast cancer. N.B. The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Breast cancer diagnosis or treatment by comparing the level of expression of a marker in a patient sample with that in the control non-breast cancer sample.
                                                                                      GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
                                                HHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                            HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPBYVNQPDVRPQPPSPREGPLPAARPA
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Mills GB;
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Sahin A, N
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                                                                                                                                                                                                                                                                                                                                       cancer associated protein sequence SEQ ID
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Hortobagyi GN, E
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25-SEP-2001; 2
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DB 6; Length 1255;

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Query Match

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QRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGWV 1043
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T cell; chromosome 17q21-q22.
                                                                 HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPBYVNQPDVRPQPPSPREGPLPAARPA
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07-NOV-2001; 2001US-0337017P.
07-MAR-2002; 2002US-0363210P.
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                                        CELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCTLVCPLHNQEVT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           A composition for diagnosing, preventing or treating disorders characterized by ErbB2 overexpression (e.g. breast cancer) comprises an ErbB2 binding peptide that binds specifically to the extracellular domain of ErbB2.
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                                                                        GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
     HHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
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100.0%; Score 6694;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1232; Conservative 0; Mismatches
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                     SLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHPCSPMCKGSR
                                       CWGESSEDCQSLTRTVCAGGCARCKGPLPTDCCHEQCAAGCTGPKHSDCLACLHFNHSGI
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GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW 1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Diagnostic or therapeutic method involves inserting medical devices including nanostructures provided with ligand into patient, and attaching nanostructures through ligand to predetermined target structure inside
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                                                                                                                                                                                                                                                                       implantable microscopic device; nanostructure; ligand; gout; bone injury;
cancer; HIV; p1; p2; human; erb-B.
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                                                                                                                                         ADA38143 standard; protein; 1255
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Best Local Similarity 100.
Matches 1232; Conservative
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Containing a dimer of a complex of EGF with EGFR in the molar ratio 1:1.

Containing a dimer of a complex of EGFR with EGFR in the molar ratio 1:1.

Also described: (1) preparation of EGFR with EGFR in the molar ratio 1:1.

Which recombinant EGFR is prepared using Lec8 cells and then deglycosylated using glycosidase; (2) preparation of a complex of EGFR or virth EGF or with another EGFR activity regulator (1), in which consists and antagonists of EGFR activity regulator (1), in which consists and antagonists of EGFR; (5) sereening method for use as agonists and antagonists of EGFR; (5) sereening method for use as agonists and antagonists of EGFR; (5) sereening method for use as agonists and antagonists of EGFR; (5) sereening method for use as epitopes identified; (7) anti-EGF or anti-EGFR antibodies using the EGF-EGFR interaction of anti-EGF or anti-EGFR antibodies using the epitopes identified; (7) anti-EGF or anti-EGFR antibodies using the ceptopes identified; (7) anti-EGF or anti-EGFR antibodies using the complex; (6) preparation of anti-EGF or anti-EGFR in the comparing and (8) polypeptides and their salts containing all or part of the amino acid sequence of the EGFR dimerisation site. (C) has contification of sonser and cancer proliferation, liver than the EGFR for use in the continuity and prevention of cancer and cancer proliferation, liver function disorders, ulcers (including stomach ulcer, skin ulcers includence represents a ratising from diabetic complications). Parkinson's disease, bone responsents and runan ErbBz amino acid sequence, which is used in the exemplification of such and provention of sequence, which is used in the exemplification of sequence, which is used in the exemplification of sequence, which is used in the exemplification of sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             present invention describes crystals of a complex (C) of epithelial
                                                                                                                                                                                                                                                             crystal; epithelial growth factor; BGF; epithelial growth factor receptor; BGFR; cytostatic; hepatotropic; antiulcer; antidabetic; dermatological; antiparkinsonian; fungicide; cancer; cancer proliferation; liver function disorder; ulcer; parkinson's disease; bone resorption disorder; ringworm; human; protein co-ordinate data; ErbB2.
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Shinozaki M;
                  DODPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255
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Muramatsu H,
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(MOCH ) MOCHIDA PHARM CO LTD.
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Nakao N,
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polypeptide, e.g. for treating cancer. The polypeptide and HER3 stimulating or activating HER3 receptor. This sequence represents the wild type human HER-2 polypeptide.
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                                                                                                                                      Novel human epidermal growth factor receptor 3 variant as agonist or antagonist of HER3 receptor, for diagnosis/treatment of cells or pathological conditions associated with aberrant expression of heregulin or HER3.
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HRRHSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                                                                                                                 HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human epidermal growth factor receptor 2 protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention relates to a novel method for the prediction, diagnosis, or prognosis of malignant neoplasia by the detection of at least two markers. The invention may also be useful for the development of cytostatic compounds through the regulation of the expression of a gene or activity of a protein associated with malignant neoplasia. The method is useful for prediction, diagnosis or prognosis of malignant neoplasia such as breast cancer, ovarian cancer, pastric cancer, colon cancer, oesophageal cancer, mesenchymal cancer, bladder cancer or non-small cell lung cancer. The polynuclectides and polypeptides defined in the specification, antisense polymuclectides targeting the polymuclectides, anticones are polymuclectides, and compounds identified by the screening methods are useful for
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                                                                                         HRRISSSTRSGGGDLTLGLEPSEEBAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                        QRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMV
                                      QRFVVIQNEDLGPASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGNV
DGI PAREI PDLLEKGERL PQPPI CTI DVYMIMVKCWMI DSECRPRFRELVSEFSRMARDP
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preventing or treating malignant neoplasia. The disease treated is preferably breast cancer. The present sequence is that of a human malignant neoplasia-related protein which may be used in the method
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                                                                                QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
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                                                                                                                                                                                                                              The present invention describes a polypeptide (I) comprising a component selected from: (a) a polypeptide epitope having any of the 503 fully defined sequences of 8-33 amino acids (SEQ ID NO:108-610); (b) an epitope cluster comprising the polypeptide of (a); (c) a polypeptide having substantial similarity to (a) or (b); (d) a polypeptide having functional similarity to (a) or (b); (d) a polypeptide having functional polypeptide of (a)-(c); or (e) a nucleic acid encoding the polypeptide of (a)-(d). (I) has vincide and cytostatic activities, and can be used in vaccines. The methods and compositions of the present invention are useful for the diagnosis and/or treatment of viral infections, cancers and tumours. The present sequence is used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epitope, epitope cluster, virucide, cytostatic, vaccine, viral infection, cancer, tumour, human, Her2-Neu.
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                          1044 HHRHRSSSTRSGGGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
DGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRMARDP
                                                                                                                                                   HDPSPLORYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
                                                                                                                                                                                                             GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
                                                                                        HHRHRSSSTRSGGGDLTLGLEPSEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New polypeptides and encoding nucleic acids that are useful epitopes target-associated antigens, useful for diagnosing and/or treating vir infections, cancers and tumors.
                                                                                                                                                                                                                                                                         DQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 90; 357pp; English.
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PRO polypeptide e.g., PRO69614, PRO71106, or PRO86388 useful for ing an immune related disorder such as systemic lupus erythematosus, atoid arthritis, osteoarthritis, juvenile chronic arthritis or
                                                                                                                                                                                                                                                                                                                                                                                                                Human, PRO, immune related disorder; systemic lupus erythematosus; rheumatoid arthritis; osteoarthritis; juvenile chronic arthritis; systemic sclerosis; Sjogren's syndrome; vasculitis; sarcoidosis; autoimmune haemolytic anaemia; autoimmune thrombocytopenia; thyroiditis; diabetes mellitus; renal disease; demyelinating disease; central nervous system; peripheral nervous system; peripheral nervous system; peripheral nervous system; chronic polymeuropathy; Guillain-Barre syndrome; chronic inflammatory demyelinating polymeuropathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to human PRO polypeptides and the polymucleotides encoding them. The polypeptides and polymucleotides are useful for treating and diagnosing immune related disorders in mammals. The immune related disorders include systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, systemic sclerosis, Sjogren's syndrome, vasculitis, sarcoidosis, autoimmune hemonytic anemia, autoimmune trombocytropenia, thyroiditis, diabetes mellitus, immune-mediated renal disease, demyelinating diseases of the central or peripheral nervous system, demyelinating polyneuropathy, gollian-Barre syndrome and chronic inflammatory demyelinating polyneuropathy, invention.
                                                                  HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSFREGPLPAARPA
                  HHRHRSSSTRSGGGDLTLGLEPSEERAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPT
                                                HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPA
                                                                                                               GATLERAKTLSPGKNGVVKDVFAFGGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW
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                                                                                                                                                                              DODPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232
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N-PSDB; ADO20008.
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                                                  QVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTYLPTNASLSFLQDIQEVQGY
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        1104 HDPSPLQRYSEDPTVPLPSETDGYVAPLTCSPQPBYVNQPDVRPQPPSPREGPLPAARPA 1163

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        1141 GATLERAKTLSPGKNGVVKDVFAFCGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW 1200

        Db
        1164 GATLERAKTLSPGKNGVVKDVFAFCGAVENPEYLTPQGGAAPQPHPPPAFSPAFDNLYYW 1223

        Qy
        1201 DQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1232

        Qy
        1224 DQDPPERGAPPSTFKGTPTAENPEYLGLDVPV 1255

        Db
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Search completed: January 25, 2005, 21:23:17 Job time: 140.275 secs

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GenCore version 5.1.6
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- protein search, using sw model OM protein

January 25, 2005, 21:16:15 Run on:

; Search time 36.8376 Seconds (without alignments) 3277.960 Million cell updates/sec

US-09-806-703A-4 6812 1 MELAALCRWGLLLALLPPGA......TFKGTPTAENPEYLGLDVPV 1255 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	protein-tyrosine k	protein-tyrosine k	p-185 precursor -				epidermal growth f	>	kinase-related tra	epidermal growth f	protein-tyrosine k	protein-tyrosine k	epidermal growth f	protein-tyrosine k	kinase-related tra	protein-tyrosine k		epidermal growth f	protein let-23 [im	protein-tyrosine k	,~,	epidermal growth f		epidermal growth f	protein-tyrosine k	protein-tyrosine k	insulin-like growt	insulin receptor p	
ΩI	A24571	TVRTNU	148161	GOHUE	A53183	TVCHLV	A47253	S06142	A36223	JC4387	TVFVLV	TVYUH	GOFFE	835745	800727	B44776	TVFVEB	A36325	E88257	870712	870713	A45558	A42032	A27131	S13807	S13808	T43220	INHUR	A36080
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% Query Match		87.9	87.	46.5	46.	4		39.7	35.7	34.4	. 52. 9	25.0	24.3	24.2	4	m	m	22.5	19.1	19.1	17.8	17.3	17.0			11.1		10.5	10.4
Score	9089	5988	5984.5	3168	3144	3123.5	3003.5	2701	2431.5	2346.5	1766.5	1703	1652.5	1647	1640	1623	1621	1536	1302	1302	1214	1177	1155	997.5	806.5	754.5	735	718	711
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insulin receptor p	insulin-like growt	insulin receptor-r	protein-tyrosine k	insulin receptor-r	insulin-like growt	insulin-like growt	insulin receptor -	insulin receptor -	insulin receptor (protein-tyrosine k	protein-tyrosine k	tyrosine kinase Mp	protein-tyrosine k	protein-tyrosine k	protein-tyrosine k
A34157	T43212	A36502	T18534	B36502	IGHUR1	A33837	T30346	A56081	S57245	A54092	150612	S49004	805582	833596	A36355
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10.4	10.2	10.2	10.1	10.0	9.6	9.4	9.5	9.5	9.1	8.9	8.7	8.7	9.8	8.6	9.8
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ALIGNMENTS

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Protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human protein erb Protein-tyrosine kinase (EC 2.7.1.112) erbB2 precursor - human protein erb NyAlternate names: c-erb-B2 protein precursor; kinase-related transforming protein erb C;Species: Homo sapiens (man) c;Species: Homo sapiens (man) C;Date: 25-Oct-1987 #sequence revision 06-Dec-1996 #text change 09-Jul-2004 S;Dates: 25-Oct-1987 #sequence revision 06-Dec-1996 #text change 09-Jul-2004 R;Yamamoto, T.; Ikawa, S.; Akiyama, T.; Semba, K.; Nomura, N.; Miyajima, N.; Saito, T.; Nature 319, 230-234, 1986 #thiaman c-erb-B-2 gene to epidermal growth A;Reference number: A24571; MUID:86118663; PMID:3003577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A,Molecule type: mRNA
A,Residues: 1-1255 cxNa>
A,Gross-references: UNIPROT:P04626; GB:X03363; NID:g31197; PIDN:CAA27060.1; PID:g31198
R,Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.
R,Semba, K.; Kamata, N.; Toyoshima, K.; Yamamoto, T.
A,Semba, K.; Lamata, N.; Toyoshima, K.; Yamamoto, T.
A,Title: A v-erbB-related protooncogene, c-exbB-2, is distinct from the c-exbB-1/epider
A,Reference number: A25491; MUID:86016729; PMID:2995967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:M11767; NID:g182163; PIDN:AAA35808.1; PID:g553282
R;Coussens, L.; Yang-Feng, T.L.; Liao, Y.C.; Chen, E.; Gray, A.; McGrath, J.; Seeburg, Science 230, 1132-1139, 1985
A;Title: Tyrosine kinase receptor with extensive homology to EGF receptor shares chromo A;Reference number: A44188; MUID:86070181; PMID:2999974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Molecule type: DNA
A;Residues: 737-1031 <SEM>
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A,Molecule type: DNA A,Residues: 740-910 <COU1> A;Cross-references: GB:M12036; NID:g183988; PIDN:AAA35978.1; PID:g183989 A;Accession: B44188 A, Accession: A44188

A;Molecule type: mRNA A;Residues: 1-517, RALL', 522,'S',524-654,'V',656-1169,'A',1171-1255 <COU2> A;Cross-references: GB:M11730; NID:g183986 A;King, C.R.; Kraus, M.H.; Aaronson, S.A. Science 229, 974-976, 1985 A;Title: Amplification of a novel v-erbB-related gene in a human mammary carcinoma. A;Reference number: 159509; MUID:85272597; PMID:2992089

A;Status: translated from GB/EMBL/DDBJ

A; Molecule type: DNA
A; Residues: 832-909 <REX>
A; Residues: 832-909 <REX>
A; Residues: 832-909 <REX>
A; Cross-references: GB:L29395; NID:g459807; PIDN:AAA35809.1; PID:g459808
B; Tal, M.; King, C.R.; Kraus, M.H.; Ullrich, A.; Schlessinger, J.; Givol, D.
Mol. Cell. Biol. 7, 2597-2601, 1987
A; Title: Human HER2 (neu) promoter: evidence for multiple mechanisms for transcriptiona
A; Reference number: 157622; MUID:87286898; PMID:3039351

A:Status: translated from GB/EMBL/DDBJ A:Molecule type: DNA A;Residues: 1-191 <TAL>

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oncogene transmembrane domain reveals no u
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C;Species: Rattus norvegicus (Norway rat)
C;Daccession: A24562; A61204
C;Accession: A24562; A01204
C;Accession: A24562; A01204
C;Accession: A24562
A;Reference number: A24562; MUID:86118662; PMID:3945311
A;Accession: A24562
A;Molecule type: mRNA
A;Residues: 1-1260 cBAR>
A;Cross references: UNIPROT:P06494; EMBL:X03362; NID:g56745; PIDN:CAA27059.1; ER;Masui, T.; Mann, A.M.; Macatee, T.L.; Garland, E.M.; Okamura, T.; Smith, R.A.
Carcinogenesis 12, 1975-1978, 1991
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                                                                                                                                                                                                                                                                                          781 YVSRLIGICITSTYQLVTQLMPYGCLLDHVRENRGRIGSQDLLNWCMQIAKGMSYLEDVR
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                                                                                       HQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLEKGERLPQPPICTIDVYMIMVKCWM
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                                                                                                                                                        RKVKVLGSGAFGTVYKGIWI PDGENVKI PVAIKVLRENTSPKANKEILDEAYVMAGVGSP
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A;Reference number: A61204; MUID:92035293; PMID:1682063
A;Accession: A61204
A;Ktatus: precliminary
A;Molecule type: DNA
A;Residues: 637-663, 'V', 665-702 < MAS>
C;Genetics:
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Fig. 100main: signal sequence #status predicted <SIG>
Fig. 100main: extracellular #status predicted <EXT>
Fig. 100main: extracellular domain repeat <EEI>
Fig. 100main: BGF receptor extracellular domain repeat <EEI>
Fig. 100main: BGF receptor extracellular domain repeat <EEI>
Fig. 100main: BGF receptor extracellular domain repeat <EEI>
Fig. 100main: intracellular #status predicted <INM>
Fig. 100main: intracellular #status predicted <INM>
Fig. 100main: protein kinase homology <EIN>
Fig. 100main: protein kinase ATP-binding motif
Fig. 100main: phosphate (Thr) (covalent) (by protein kinase C) #status predicted
Fig. 100main: protein kinase ATP-binding site: phosphate (Thr) (covalent) (by autophosphorylation)
                               30
                                                                       A Gene: GDB:ERBB2; NGL; NEU; HER-2
A;Gross-references: GDB:120613; OMIM:164870
A;Arcoss-references: GDB:120613; OMIM:164870
A;Arcoss-references: GDB:120613; OMIM:164870
A;Arcoss-references: GDB:120613; OMIM:164870
A;Note: the list of introns is incomplete
C;Function:
A;Description: catalyzes the phosphorylation of a peptidyl tyrosine residue by ATP
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; autophosphorylation; duplication; glycoprotein; phosphoprotein; phosphor
A,Cross-references: GB:M16792, NID:g183983, PIDN:AAA58637.1; PID:g553332
C;Comment: Amplification and overexpression of this erbB-related gene occurs in about
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Pred. No. 1.4e-275;
1; Mismatches 1;
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Best Local Similarity 99.8%;
Matches 1253; Conservative 1
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C;Species: Mesocricetus auratus (golden hamster)
C;Species: Mesocricetus auratus (golden hamster)
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 0.2-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: 148161
R;Nakamura, T.; Ushijima, T.; Ishizaka, Y.; Nagao, M.; Arai, M.; Yamazaki, Y.; I
Gene 140, 251-255, 1994
A;Title: Cloning and activation of the Syrian hamster neu proto-oncogene.
A;Reference number: 148161; MUID:94193007; PMID:7908275
A;Accession: 148161
A;Residues: 1-1254 <RES>
A;Cross-treferences: UNIPROT:Q60553; GB:D16295; NID:g493236; PIDN:BAA03801.1; PII
C;Genetics:
A;Gene: neu
C;Superfamally: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP
F;718-983/Domain: protein kinase homology <KIN>
F;726-734/Region: protein kinase ATP-binding motif
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; Pred. No. 1.8e-241;
58; Mismatches 97; Indels
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                                              #status
F;658-680/Domain: transmembrane #status predicted with the protein kinase homology <kIN>
F;723-988/Domain: protein kinase homology <kIN>
F;73-988/Domain: protein kinase ATP-binding motif
F;71,191,263,535,576,634/Binding site: carbohydrate (Asn) (covalent) #status F;71,191,263,535,576,634/Binding site: carbohydrate (Asn) (covalent) #status predicted F;781/Rinding site: phosphate (Thr) (covalent) #status predicted F;882,1227,1253/Binding site: phosphate (Tyr) (covalent) #status predicted
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                                                                                                                     Length 1260;
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                                                                                                                    Score 5988; DB 1;
Pred. No. 1.3e-241;
); Mismatches 102;
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Best Local Similarity 87.7%;
Matches 1103; Conservative 50
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A; Molecule type: mRNA
A; Molecule type: maslated the codon AAG for residue 540 as Asn
A; Molecule the authors translated the codon AAG for residue 540 as Asn
A; Molecule the authors translated the codon AAG for residue 540 as Asn
A; Molecule type: MI S; Au S1, 4920-4924; Mellino, G.T.; Pastan, I.
Proc. Natl. Acad. Sci. U.S.A. 82, 4920-4924; Mellino, G.T.; Pastan, I.
A; Reference number: A25772; MUID: 85270438; PMID: 2991899
A; Accession: A25772
A; Status: translation not shown
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-29 < ISH>
A; Cross-references: GB:MI1234; NID: G181981; PIDN: AASC3370.1; PID: G553272
A; Cross-references: GB:MI1234; NID: G181981; PIDN: AASC3370.1; PID: G553272
A; Title: The human EGF receptor gene: structure of the 110 kb locus and identification A; A; Archiver conumber: S30024; MUID: 88217333; PMID: 3329716
A; Archiver conumber: S30024; MUID: 88217333; PMID: 3329716
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A; Residues: 1-29 cHAL>
A; Experimental source: carcinoma cell line A431-7
B; Xu, Y.; Ishii, S; Clark, A.J.L.; Sullivan, M.; Wilson, R.K.; Ma, D.P.; Roe, B.A.; Mer Nature 309, 806-810, 1984
A; Title: Human epidermal growth factor receptor cDNA is homologous to a variety of RNAs A; Reference number: A00642; MUD: 84245835; PMID: 6330563
A; Reference number: A00642
A; Residues: RCAWRRA, 150-187, KGVIQAV, 195, M., 197, A', 199-222, S', 224-304, RA', 307-321
A; Residues: RCAWRRA, 150-187, KGVIQAV, 195, MM', 197, A', 199-222, S', 224-304, RA', 307-321
A; Residues: RCAWRRA, 150-187, KGVIGAV, Stolarsky, L.S.; Weber, W.; Evans, R.M.; Verma, I Science 224, 843-848, 1984
A; Title: Expression cloning of human EGF receptor complementary DNA: gene amplification A, Accession. A, 241
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A; Residues: 740-744, XY, 746-747 < RUS>
R; Mroczkowski, B.; Mosig, G.; Cohen, S.
Nature 309, 270-273, 1984
A; Title: ATP-stimulated interaction between epidermal growth factor receptor and A; Reference number: A38023; MUID:84191554; PMID:6325948
A; Contents: annotation; receptor activity
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A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-29 c.HA2-
A;Cross-references: EMBL:X06370; NID:g31118; PIDN:CAA29668.1; PID:g31119
R;Haley, J.D.; Waterfield, M.D.
J. Biol. (Them. 266, 1746-1753, 1991
A;Title: Contributory effects of de Novo transcription and premature tran
A;Reference number: A38672; MUID:91107677; PMID:1988448
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A Molecule type: mRNA
A Residues: 713-964 (LIN)
A Experimental Source: epidermoid carcinoma cell line A431

R Simmen, F.A.; Gope, M.L.; Schulz, T.Z.; Wright, D.A.; Carpenter, G.; Biochem. Biophyse. Res. Commun. 124, 125-132, 1984
A; Reference number: A23062; MulD: B5046483; PMID: 6093780
A; Accession: A23062
A; MulD: B5046483; PMID: 6093780
A; Residues: 1028-1210 <SIM>
A; Residues: 1028-1210 <SIM>
A; Reference number: A05281
A; Reference number: A05281
A; Reference number: A05281
A; Residues: 224, 234-237, 1984
A; Residues: 25-30, %'3, 32-51,454-467 <WEB>
B; Russo, M.W.; Lukas, T.J.; Cohen, S.; Staros, J.V.
J. Biol. Chem. 260, 5205-5208, 1985
A; Title: Identification of residues in the nucleotide binding site of the A; Reference number: A60143; MulD: 85182650; PMID: 2985580
A; Reference number: A00641; MUID:84219729; PMID:6328312
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A:Title: Human epidermal growth factor receptor cDNA sequence and aberrant expression of
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Apjugamul growth factor receptor precursor - mouse

C;Species: Mus musculus (house mouse)

C;Species: Musculus (house mouse)

C;Accession: A53183; A43818; Z2492; A28941; Copeland, N.G.; Earp, H.S.; Jenkins, N.A.;

G;Accession: A53183; H.K.; Qiu, T.H.; Copeland, N.G.; Earp, H.S.; Jenkins, N.A.;

A;Title: The mouse waved-2 phenotype results from a point mutation in the EGF receptor

A;Title: The mouse waved-2 phenotype results from a point mutation in the EGF receptor

A;Reference number: A33183; MuID:94170986; PMID:8125255

A;Molecule type: mRNA

A;Residues: 1-1210 *LUB>

A;Cross-references: UNIPROT:Q01279; GB:U03425

B;Avivi, A; Lax, I.; Ullrich, A.; Schlessinger, J.; Givol, D.; Morse, B.

Oncogene 6, 673-676, 1991

A;Reference number: A43818; MUID:91232866; PMID:2030916

A;Residues: 1-714 *AVIV.

A;Cross-references: GB:X59698

B;Bisinger, D.P.; Serrero, G.

B;Bisinger, D.P.; Serrero, G.
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            NNTL-VWKYADAGHVCHLCHPNCTYGCTGPGLEGCPTNGPKIP--SIATGMVGALLLLLV
                                                              VVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRKVK
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A;Note: the EGF receptor (and other tyrosine kinases) can nick double-stranded DNA R;Chen, W.S.; Lazar, C.S.; Lund, K.A.; Welsh, J.B.; Chang, C.P.; Walton, G.M.; Der, C.J. Cell 59, 33-43, 1989
A;Title: Functional independence of the epidermal growth factor receptor from a domain r A;Reference number: A3331; MUID:90003233; PMID:2790960
A;Contents: annotation; internalization signal
C;Comment: Binding of EGF to the receptor leads to internalization of the EGF-receptor C;Genetics:
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46.5%; Score 3168; DB 1; Length 1210;
Best Local Similarity 49.8%; Pred. No. 1.6e-124;
Matches 630; Conservative 178; Mismatches 351; Indels 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F;999-1046/Region: coated pit mediated internalization signal F;1047-1210/Region: inhibitory F;128,175,352,413,444,528,603/Binding site: carbohydrate (Asn) F;745/Active site: Lys #status experimental
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Policimal growth factor receptor precursor - chicken
N;Contains: protein-tyrosine kinase (EC 2.7.1.112) erbB
C;Species: Gallus gallus (chicken)
C;Date: 28-Feb-1986 #sequence_revision 05-May-1995 #text_change 09-Jul-2004
C;Accession: A27720; A00643
R;Lax I; Johnson, A.; Howk, R.; Sap, J.; Bellot, F.; Winkler, M.; Ullrich, A.; Vennst.
A;Title: Chicken epidermal growth factor (EGF) receptor: CDNA cloning, expression in monapterence number: A27720; MUID:88261272; PMID:3260329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SECRPRFRELVSEFSRMARDPORFVVIQ-NEDLGPASPLDSTFYRSLLEDDDMGDLVDAE 1021
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                            VVVLGVVFGI-LIKRRQQKIRKYTMRRLLQETELVEPLTPSGAMPNQAQMRILKETELRK 722
                                                                                                                                                                                                                                                                                                 VKVLGSGAFGTVYKGIWIPDGENVKIPVAIKVLRENTSPKANKEILDEAYVMAGVGSPYV 782
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                                                                       QLFRNPHQALLHTANRPEDECVGEGLACHQLCARGHCWGPGPTQCVNCSQFLRGQECVEE
                                                                                                                              CRVLOGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSG
                                                                                                                                                                                     VKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILL
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A; Molecule type: mRNA
A; Redidues: 969-971, K', 973-1115, D' < EIS>
A; Crosd-uces: 969-971, G' , 973-1115, D' < EIS>
A; Crosd-uces: BBBL: 212608
R; Heisermann, G. J.; Gill, G.N.
J. Biol. Chem. 263, 13152-13158, 1988
A; Title: Epidermal growth factor receptor threonine and & A; Reference number: A28941; MUID:88330814; PMID:3138233
A; Accession: A28941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
46.2%; Score 3144; DB 2;
Best Local Similarity 49.8%; Pred. No. 1.6e-123;
Matches 633; Conservative 170; Mismatches 359;
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A4723
Cypecies: Homo sapiens (man)
Cypecies: Homo sapiens (man)
Cybate: 22-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
CyAccession: A47253
R;Plowman, G.D.; Culouscou, J.M.; Whitney, G.S.; Green, J.M.; Carlton, G.W.; Foy, L.; N
Proc. Natl. Acad. Sci. US.A. 90; 1746-1750, 1933
A;Title: Ligand-specific activation of HER4(P1980erbB4, a fourth member of the epidermal
A;Reference number: A47253
A;Accession: A47253
A;Accession: A47253
A;Accession: A47253
A;Residues: preliminary; not compared with conceptual translation
A;Molecule type: nucleic acid
A;Residues: 1-1308 sPLO.
A;Cross-references: UNIPROT: Q15303; GB:L07868; NID:9337359; PIDN:AAB59446.1; PID:933736
A;Notes: sequence extracted from NCBI backbone (NCBIP:126842)
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords AFP; growth factor receptor; protein kinase homology KIN>
F;716-981/Domain: protein kinase ATP-binding motif
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C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Superfamily: epidermal growth factor receptor; protein kinase cjecy factor kinase
E;1-30/Domain: signal sequence #status predicted <SIS>
F;1-30/Domain: signal sequence #status predicted <SIS>
F;1-1223/Product: epidermal growth factor receptor #status predicted <KXT>
F;31-654/Domain: EGF receptor extracellular domain repeat <EEI>
F;30-70/Domain: EGF receptor extracellular domain repeat <EEI>
F;55-677/Domain: EGF receptor extracellular domain repeat <EEI>
F;55-677/Domain: growth mase ATP-binding predicted <TWM>
F;72-735/Region: intracellular #status predicted <TWM>
F;72-735/Region: protein kinase homology <ERI>
F;73-735/Region: protein kinase ATP-binding motif F;19-984/Domain: protein kinase ATP-binding motif F;19-560/Binding site: carbohydrate (Ser) (covalent) #status predicted F;687/Binding site: phosphate (Ser) (covalent) (by protein kinase C) #status predicted F;687/Binding site: Lys #status predicted (Tyr) (covalent) (by autophosphorylation) #stat
                                                          A;Cross-references: UNIPROT:P00534; GB:MZU386
KN118en, T.W.; Maroney, P.A.; Goodwin, R.G.; Rottman, F.M.; Crittenden, L.B.; Raines, M Call 41, 719-726, 1985
A;Title: c-erbB activation in ALV-induced erythroblastosis: novel RNA processing and pro A;Reference number: A00643; MUID:8522822; PMID:2988784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243 CAAGCTGPRESDCLACRKFRDDATCKDTCPPLVLXNPTTYQMDVNPEGKYSFGATCVREC 302
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                   Molecule type: mRNA
Residues: 1-1223 <LAX>
Cross-references: UNIPROT:P00534;
                                                                                                                                                                                                                       A,Cross-references: GB:M10066
C;Genetics:
                                                                                                                                                               A;Accession: A00643
A;Molecule type: mRNA
A;Residues: 585-1223 <NIL>
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ch 44.1%; Score 3003.5; DB 2; Length 1308; 1 Similarity 45.6%; Pred. No. 1.2e-117; 614; Conservative 184; Mismatches 375; Indels 173; Gaps 28;	WGLLLALILPPGAASTQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGNLELTY 64 :	LPTNASLSFLQDIOBVQGYVLJAHNOVRQVPLORLRIVRGTQLFEDNYALAVLDNGDPLN 124 -	TTPVTGASPGGLRELOLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLI 184	DINRSRACHPCSPMCKGSRCWGESSEDCQSLTRIVCAGGC-ARCKGPLPTDCCHEQCAAG 243	CTGPKHSDCLACLHFNHSGICELHCPALVTYNTDIFESMPNPEGRYTPGASCVTACPYNY 303 - - - - - - - - - -	LSTDVGSCTLVCPLHNQEVTAEDGTQRCEKCSKPCARVCYGLGMEHLREVRAVTSANIQE 363 V-VDSSCVRACPSSKMEV-EENGIKMCKPCTDICPKACDGIGTGSLMSAQTVDSSNIDK 355	FAGCKKIFGSLAPLPESFDGDPASNTAPLQPEQLQVFETLEEITGYLYISAWPDSLPDLS 423	VPQNLQVIRGRILHNGAYSLTLGGLGISWLGLRSLRELGSGLALIHHNTHLCFVHTVPWD 483	OLFRNPHQALLHTANRPEDBECVGEGLACHOLCARGHCWGPGPTQCVNCSQFLRGQECVEE 543	CRVLQGLPREXVNARHCLPCHPECQP-QNGSVTCFGPBADQCVACAHYKDPPFCVARCPS 602	GVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPL 651	TSIVSAVV-GILLVVVLGVVFGILIKRRQKIRKYTMRRLLQETELVEPLTPSGAMPNQA 710 	OMRILKETELRKVKVLGSGAFGTVYKGIMIPDGENVKIPVAIKVLRENTSPKANKEILDE 770 	AYVMAGVGSPYVSRLLGICLTSTVQLVTQLMPYGCLLDHVRENRGRLGSQDLLNWCMQIA 830	KGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEXHADGGKVPIKWM 890	LESILRRRFTHQSDVWSYGVTVWELMTFGAKFYDGIPAREIPDLLEKGERLPQPPICTID 950 - - - - - - - - - - - -	VYMIMVKCWMIDSECRPRFRELVSEFSRWARDPQRFVVIQNED-LGFASPLDSTFYRSLL 1009	EDDDMGDLVDAEEYLVPQQGFFCFDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSEEE 1069
ch 1 Simila 614; Co	9 WGLLL	65 LPTNA : 68 IEHNR	125 NTTPV 128 NF	185 DTNRS 179 STNGS	244 CTGPK : 238 CSGPK	304 LSTDV : 298 V-VDS	364 FAGCK		4 6	544 CRVL(: 536 CNLYI	603 GVKPI :: 596 GLQG	52	711 OMRII : 709 QLRII	771 AYVM : 769 ALIM	831 KGMS 829 KGMM	891 LESI 889 LECI	951 VYMI : 949 VYMV	0
Query Match Best Local S Matches 614	Qy Db	S G	Oy 1	95 1		, . ,	 					Qy Dp	Qy	çy Db	Qy	oy B	55 25	0y 1

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A;Introns 19213; 898/1; 947/1; 979/3; 1025/3; 1056/1
C;Superfamily: epidermal growth factor receptor; protein kinase homology
C;Keywords: ATP; growth factor receptor; phosphotransferase; transmembrane protein; tyre
F;1-25/Domain: signal sequence #status predicted <SIG>
F;26-1166/Product: kinase-related transforming protein (Tu) #status predicted <MAT>
F;707-972/Domain: protein kinase homology <KIN>
F;715-723/Region: protein kinase ATP-binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein-tyrosine kinase (EC 2.7.1.112) mrk-Y precursor - southern platyfish NiAlternate names: epidermal growth factor receptor homolog; kinase-related transforming; Species: Xiphophorus maculatus (southern platyfish)
C;Species: Xiphophorus maculatus (southern platyfish)
C;Accession: 806442; 813809
R;Wittbrodt, J; Adam, D; Malitschek, B; Maeueler, W; Raulf, F; Telling, A; Robert: Maure 341, 415-421, 1989
A;Title: Novel putative receptor tyrosine kinase encoded by the melanoma-inducing Tu losation number: 806142; MUID:90015140; PMID:2797166
                                                                                 | | ::|| ::|| ; : || 1057 TPMSGNQFVXRDGGFAAEQGVSVPYRAPTSTIPEAPVAQGATAEIFDDSCCNGTLRKPVA 1116
                                                                                                                                                                   ENPFVSRR------PPKAE 1199
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1009 DEEDLEDWADAEEYLVP-QAFNIPPP-----IYTSRARIDSNRS-----EIGHSPPPAY 1056
                                                          -----PLAP-SEGAGSDVFDGDLGMGAAKGLQS 1100
                                                                                                                                        LPTHDDSSPLORYSEDPTVPLPS-----ETDGYVAPLTCSPOPEYVNOPDVRPQPPSPR 1153
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39.7%; Score 2701; DB 1;
Best Local Similarity 45.5%; Pred. No. 3.8e-105;
Matches 576; Conservative 163; Mismatches 390;
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Kinase-related transforming protein (erbB3) (EC 2.7.1.-) precursor - human C; Species Homo sapiens (man)
C; Species Homo sapiens (man)
C; Date: 04-Oct-1991 Heaguence_revision 13-Jan-1993 #text_change 09-Jul-2004
C; Accession: A36223; I59164
R; Kraus, M. H.; Isaing, W.; Miki, T.; Popescu, N.C.; Aaronson, S.A.
R; Kraus, M.H.; Isaing, W.; Miki, T.; Popescu, N.C.; Aaronson, S.A.
Proc. Natl. Acad. Sci. U.S.A. 86, 9193-9197, 1989
A; Title: Isolation and characterization of ERBB3, a third member of the ERBB/epidermal A; Reference number: A36223; MUD: 90083234; PMID: 2687875
A; Accession: A36223
A; Status: preliminary
A; Molecule type: mRNA
A; Molecule type: MID: 90311312; PMID: 2164210
A; Title: Molecular cloning and expression of another epidermal growth factor receptor-r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Genee: GDB:ERBB3; HER3
A;Cross-references: GDB:119880; OMIM:190151
A;Cross-references: GDB:119880; OMIM:190151
A;Abap position: 12413-12413
C;Superfamily: unassigned Ser/Thr or Tyr-specific protein kinases; protein kinase homol C;Keywords: ATP; phosphotransferase
C;Keywords: ATP; phosphotransferase
F;707-972/Domain: protein kinase homology <KIN>
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Modecule type: mRNA
A;Residues: 1-559, 'G', 561-957,'F', 959-1063, 'G',1065-1342 <RES>
A;Cross-references: GB:M34309; NID:g183990; PIDN:AAA35979:1; PID:g306841
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11 Similarity 40.7%; Pred. No. 6.8e-94;
533; Conservative 191; Mismatches 458; Indels 129;
                             ENPEYLG 1250
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                                                                                                                                                    QCAAGCTGPKHSDCLACLHFNHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTA
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NyAlternate names: ErbB3 protein; HER3 protein
C;Species: Rattus norvegicus (Norway rat)
C;Date: 17-Jan-1996 #sequence_revision 19-Apr-1996 #text_change 16-Aug-2004
C;Accession: JC4387
R;Hellyer, N.J.; Kim, H.H.; Greaves, C.H.; Sierke, S.L.; Koland, J.G.
Gene 165, 279-284, 1995
A;Title: Cloning of the rat ErbB3 cDNA and characterization of the recombinant p
A;Reference number: JC4387; MUID:96096535; PMID:8522190
A;Resesion: JC4387
A;Molecule type: mRNA
A;Residues: 1-1339 <HEL>
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                                               LRGPTEERLDIKHNRPRRDCVAEGKVCDPLCSSGGCWGPGPGCCLSCRNYSRGGVCVTHC
                                                                      RVLQGLPREYVNARHCLPCHPECQPQNGSVTCFGPEADQCVACAHYKDPPFCVARCPSGV
                                                                                     NFINGEPREFAHEAECFSCHPECOPMEGTATCNGSGSDTCAOCAHFRDGPHCVSSCPHGV
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A;Cross-references: GB:U29339; NID:g915389; PID:g915390
A;Experimental source: liver
A;Note: The authors translated the codon ARC for residue 369 as Thr and GTT for residue c;Comment: This protein is a functional heregulin receptor that transduces signals to t;C;Genetics:
A;Gene: ErbB3
C;Genetics:
A;Gene: ErbB3
C;Superfamily: protein kinase homology
C;Keywords: Approach factor receptor; liver; phosphoprotein; transmembrane protein F;1-19/Domain: signal sequence #status predicted <SIG-F;1-19/Domain: signal sequence #status predicted <SIG-F;20-1339/Product: epidermal growth factor homology #status predicted <TWM-F;705-970/Domain: protein kinase homology <KIN-F;705-970/Domain: protein kinase homology <KIN-F;705-970/Domain: protein kinase ATP-binding motif F;939,1051,1156,1194,1196,1219,1257,1259,1273,1286,1325/Binding site: phosphate (Tyr) ((7.1))
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LAALCRWGLLLALLPPGAA---STQVCTGTDMKLRLPASPETHLDMLRHLYQGCQVVQGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 34.4%; Score 2346.5; DB 2; Length Best Local Similarity 40.8%; Pred. No. 2.3e-90; Matches 523; Conservative 171; Mismatches 434; Indels
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DD	3 Qy 757 0b 233	1013 OY 817 LGSQDLIAWCWQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETE :	1068 QY 877 YHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE	Qy 937 KGERLPQPPICTIDVYMIMVKCWMIDSECRPRERLVSEFSRMARDPQRFVVIQ-NEDLG	1145 QY 996 PASPLDSTFYRSLLEDDDWGDLVDABEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSG	1187 QY 1056 GGDLTLGLEPSEEEAPRSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQ	Qy 1111 RYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLE	Qy 1169 RAKTLSPGKNGVVKDVFAFGGAVENPEXLTPQGGAAPQPHPPPAF	; Raines, M	AA48763.1; Gallus gal	A;Accession: A00644 A;Molecule type: DNA A;Residues: 1-604 < xAm> A;Residues: 1-604 < xAm> A;References: UNIPROT:P00535; GB:K01216; NID:g209676; PIDN:AAA42400.1; PID:g20967 A;Cross-references: UNIPROT:P00535; GB:K01216; NID:g209676; PIDN:AAA42400.1; PID:g20967 A;Cross-references: UNIPROT:P00535; GB:K01216; NID:g209676; PIDN:AAA42400.1; PID:g20967 B;Debuire, B.; Henry, C.; Benaissa, M.; Biserte, G.; Claverie, J.M.; Saule, S.; Martin, Science 224, 1456-1459, 1984 A;Title: Sequencing the erbA gene of avian erythroblastosis virus reveals a new type of A;Reference number: A38022; MUID:84223957; PMID:6328658		637 C;Superramily: epidermal growth factor receptor; protein kinase homoid C;Keywords: ATP; oncogene; phosphotransferase; transforming protein; t 116 F;130-395/Domain: protein kinase homology «KIN» F:138-146/Region: protein kinase ATD-hinding morif
VGSLDHAHIVRLIGLCPGSSLQLVTQYLPLGSLLDHVKQHRETLGPQLLLNWGVQIAKGM SYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETEYHADGGKVPIKMMALES ::		IMVKCWMIDSECRPRFRELVSEFSRMARDPQREVVIQNEDLGPASPLDSTFYRSLLEDDD :	MGDLVDAEEYLVPQGGFFCPDPAPGAGGMVHHRHRSSSTRSGGGDLTLGLEPSBE :		VPLPSETDGYVAPLTCSPQPEYVNQPDV 11 :- :	RPQPPSPREGPKDVFAF		RESULT 11 TVFVID. TVFVID. TVFVID. TVFVID. TVFVID. N; CONTAINS: amino end of gag protein; env protein fragment; protein-tyrosine C; Species: avian leukosis virus, ALV C; Species: avian leukosis virus, ALV C; Species: BO0643; A00643	Rottman, F.M.; Crittenden, L.B throblastosis: novel RNA proces ID:2988784	; GB:M13881; NID:g211749; PIDN:AAA48763 9.0, the source is designated as Gallus ag-env-erbB protein.	A;Gene: gag-env-erbB C;Superfamily: epidermal growth factor receptor; protein kinase homology C;Superfamily: epidermal growth factor receptor; protein; tyrosine C;Keywords: AFP: oncogene; phosphotransferase; transforming protein; tyrosine F;1-6/Product: gag protein (fragment) #status predicted <gag> F;7-59/Product: protein (fragment) #status predicted <erb> F;00-698/Product: protein (fragment) #status predicted <erb> F;20-459/Domain: protein kinase ATP-binding motif</erb></erb></gag>	edicted Score 1766.5; DB 1; Length 698; Pred. No. 1.5e-66; O; Mismatches 137; Indels 125; Gaps	GFEADQUAGATATADEFECVARAESGAREDES IMPLIMATEDEEGACQFCFINCTHSCVDL

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A; Molecule type: DNA
A; Residues: 'A', 832-866, 'V', 868-943, 'QTPSLVK' < WAD>
A; Residues: 'A', 832-866, 'V', 868-943, 'QTPSLVK' < WAD>
A; Cross-references: EMBL:X02293; NID:97922; PIDN:CAA26157.1; PID:9929565
C; Comment: This sequence is tentative because the introns have not been identified.
C; Genetics:
A; Gene: FlyBase: Egfr
A; Cross-references: FlyBase: FBgn0003731
A; Map position: 2 57F
C; Superfamily: epidermal growth factor receptor; protein kinase homology
C; Keywords: AFP; autophosphorylation; duplication; glycoprotein; phosphorotein; c; Superfamily: epidermal #status predicted < EXT>
C; Superfamily: extracellular #status predicted < FTY>
F; 733-764/Domain: extracellular #status predicted < FTY>
F; 751-732/Domain: intransmembrane #status predicted < FTY>
F; 751-732/Domain: protein kinase homology < FTNN>
F; 816-824/Region: protein kinase ATP-binding motif
F; 712, 300; 324, 353, 518, 688, 695, 700/Binding site: carbohydrate (ABN)
F; 714/Binding site: bhosphate (Thr) (covalent) (by protein kinase C) #status predicted
F; 1181/Binding site: phosphate (Thr) (covalent) (by autophosphorylation) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : | | : | | : 427 AIQKEPEQKVWVNENLRADLCGKFLTILISVQHNIIMHIFAICREKWNHLLGSVQRGRLL 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    609 SYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQRASPLTSIVSAVVGILLVVVLG 668
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SLAFLPESFDG--DPASNTA-----PLQPEQLQVFETLEEITGYLYISAWPDSLPDLSV 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           135 GGLRELQLRSLTEILKGGVLIQRNPQLCYQDTILWKDIFHKNNQLALTLIDTNRSRACHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       142 CHESCTHG-CWGEGPKNCQKFSKLTCSPQCAGGRCYGPKPRECCHLFCAGGCTGPTQKDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201 IACKNFFDEAVSKEECPPWRKYNPTTYVLETNPEGKYAYGATCVKECP-GHLLRDNGACV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260 RSCPQDKMDKGGE-----CVPCNGPCPKTCPGVTVLH-----AGNIDSFRNCTVIDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----CHQLCARGHCWGPGPTQCVNCSQFLRGQECVEECRVLQGLPREYV---NARHCLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              607 AVCRKCHPLCELCTINYGYHEQVCSKCTHYKRREQCETEC-----PADHYTDEEQRECFQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80 VQGYVLIAHNQVRQVPLQRLRIVRGTQLF----EDNYALAVLDNGDPLNNTTPVTGASP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LACLHFINHSGICELHCPALVTYNTDTFESMPNPEGRYTFGASCVTACPYNYLSTDVGSCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            547 ARYAIQSAGLAMELEQITARSASMRHSKTLPAEGRQVPRWVFLGVCASARAGIAEPLAGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHPECQPQNGSVTCFGPEADQCVACAHYK-----DPPF-----CVARCPSGVK-PDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CSPMCKGSRCWGESSEDCOSLTRTVCAGGCA--RCKGPLPTDCCHEQCAAGCTGPKHSDC
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Contains: protein-tyrosine kinase (BC 2.7.1.112) erbb
Cispecies: Drosophila melanogaster
Cispecies: Drosophila melanogaster
Cistar 2.7-Mar.1987 #sequence_revision 17-Mar.1987 #text_change 09-Jul-2004
Cistar 2.7-Mar.1987 #sequence_revision 17-Mar.1987 #text_change 09-Jul-2004
Cistar 2.7-Mar.1987 #sequence_revision 17-Mar.1987 #text_change 09-Jul-2004
Cistar 2.7-Mar.1985
A;Title: The Drosophila EGF receptor gene homolog: conservation of both hormone binding
A;Title: The Drosophila EGF receptor gene homolog: conservation of both hormone binding
A;Accession: A00640
A;Molecule type: DNA
A;Residues: 1-1330 cilly
A;Accession: A00640
A;Molecule type: DNA
A;Residues: UNIPROT:P04412; EMBL:K03054
B;Waddworth, S.C.; Vincent III, W.S.; Bilodeau-Wentworth, D.
Nature 314, 178-180, 1985
A;Title: A Drosophila genomic sequence with homology to human epidermal growth factor re
A;Reference number: A38021; MUID:85137938; PMID:2983322
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                                                                                        CAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEEGACQPCPINCTHSCVDLDDKGCPAEQ
                                                                                                                                                                               647 RASPLTSIVSAVV-GILLVVVLGVVFGILIKRRQQKIRKYTMRRLLQETELVEPLTPSGA
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                                                    Gaps
                                                  126;
      Length 604;
                                               Indels
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                                             76; Mismatches 128;
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  Score 1703; DB 1;
Pred. No. 5.5e-64;
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25.0%; £
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	638 DDKGCPAEQRASPLTSIVSAVV-GILLIVVULGVVFGILLIKBRQOKIRKYTMRRLLQETEL
OY 1018 VDAEEYLVPQQGFFCPDPAPGAGGWVHHRHRSSSTRSGGGDLTLGLEPSEEBAP 1071 Db 1105 TDGSEAIAKPDDYLQPKAALGPSHRTDCTDEMPKLNRYC 1143 QY 1072 RSPLAPSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQRYSEDPTVPLPSETDGYV 1128	Db 414 LPSPTDSKFYRTLMEEEDMEDIVDADBYLVPHQGFFNSPST 454 Qy 1056 GGDLTLGLEPSEEEAPRSPLAPSEGAGSDVPDGDLGMGAAKGLQSLPTHDPSPLQ 1110 Db 455SRTPLLSSLSATSNNSATNCIDRNGG
1129 APLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGATLERAKTLSPGKNGVVKDVFAFG 1188	Db 482
RESULT 14 S35745 protein-tyrosine kinase (EC 2.7.1.112) erbB - avian erythroblastosis virus C;Species: avian erythroblastosis virus C;Date: 03-Mar-1994 #sequence_revision 26-May-1995 #text_change 09-Jul-2004 C;Accession: S35745 R;Vennstroem, B. R;Vennstroem, B. R;Neristed to the EMBL Data Library, March 1993 A;Reference number: S35743 A;Accession: S35745 A;Accession: S35745 A;Accession: S35745 A;Accession: S35745 A;Accession: S35745 A;Accession: S35745 A;Coresion:	kinase-related transforming protein (erbB) (EC 2.7.1) - avian erythroblastosis virus C; Species: avian erythroblastosis virus C; Species: avian erythroblastosis virus C; Date: 01-Dec-1889 #text_change 09-Jul-2004 C; Date: 01-Dec-1889 #text_change 09-Jul-2004 C; Accession: S00727 R; Scotting, P.; Vennstrow, B.; Jansen, M.; Graf, T.; Beug, H.; Hayman, M.J. Oncogene Res. 1, 265-278, 1987 A; Title: Common site of mutation in the erbB gene of avian erythroblastosis virus mutan A; Reference number: S00727; MUID: 88217326; PMID: 2897102 A; Molecule type: DNA A; Residues: 1-545 <sco>A; Molecule type: DNA A; Residues: UNIPROT: Q85468; UNIPROT: Q64895; EMBL: X06943 C; Genetics: A; Appens: erbB</sco>
ific p	Cycyptominity: Proposition factor receptor, process converses (Skeywords: ATP) phosphotransferase F;135-400/Domain: protein kinase homology «KIN» F;143-151/Region: protein kinase ATP-binding motif Query Match Best Local Similarity 54.9%; Pred. No. 2.1e-61; Matches 345; Conservative 69; Mismatches 122; Indels 92; Gaps 15;
Best Local Similarity 54.9%; Pred. No. 1.1e-61; Matches 345; Conservative 70; Mismatches 121; Indels 92; Gaps 15; Qy 578 GPEADQCVACAHYKDPPFCVARCPSGVKPDLSYMPIWKFPDEGACQPCFINCTHSCVDL 637	Oy 578 GREADQCVACAHYKDPPFCVARCPSGYKPDLSYMPIWKFPDEEGACQPPINCTHSCVDL 637 1

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1056 GGDLTLGLEPSEEEAPRSPL----APSEGAGSDVFDGDLGMGAAKGLQSLPTHDPSPLQ 1110
                                                                                                                                                                                                                                                                                                                                                                        1111 RYSEDPTVPLPSETDGYVAPLTCSPQPEYVNQPDVRPQPPSPREGPLPAARPAGAT-LER 1169
                                                                                                                                                                                                                                                                   996 PASPLDSTFYRSLLEDDDMGDLVDAEEYLVPQQGFFCPDPAPGAGGMVHHRHRSSSTRSG 1055
697 VEPLTPSGAMPNQAQMRILKETELRKVKVLGSGAFGTVYKGIWIPDGENVKIBVAIKVLR 756
                                                    937 KGERLPOPPICTIDVYMIMVKCWMIDSECRPRFRELVSEFSRNARDPORFVVIQ-NEDLG 995
                                                                                                        817 LGSQDLLNWCMQIAKGMSYLEDVRLVHRDLAARNVLVKSPNHVKITDFGLARLLDIDETE 876
                                                                                                                        877 YHADGGKVPIKWMALESILRRRFTHQSDVWSYGVTVWELMTFGAKPYDGIPAREIPDLLE 936
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Search completed: January 25, 2005, 21:30:29 Job time : 44.8376 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model

January 25, 2005, 06:04:09; Search time 12.9167 Seconds (without alignments) 111.736 Million cell updates/sec Run on:

Title: Perfect score:

US-09-806-703A-12 74 1 QYIKANSKFIGITEL 15 Sequence: BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched: Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

PIR 79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result	Query		6	SUMMARIES	
Score	Match	Match Length	8 :	ID	Description
74	100.0	1315	7	BTCLTN	
44.5	60.1	244	~	S29982	class II histocomp
44	59.5	99	~	831029	· gene 84 protein -
43	58.1	180		G86826	diamine N-acetyltr
43	58.1	899		T42976	hypothetical prote
42.5	57.4	1060		806286	major merozoite su
42.5	57.4	1086	7	816752	major merozoite su
42.5	57.4	1701		A26868	major merozoite su
42.5	57.4	1701		A54498	major merozoite su
•	57.4	1726		SAZQGM	major merozoite su
42.5	57.4	1726	~	A45948	major merozoite su
42	56.8	1333		S38635	blastopia polyprot
41	55.4	123		G48677	Ig heavy chain V-D
41	55.4	447		H97146	siderophore/Surfac
41	55.4		•	G36812	hypothetical prote
40.5	4			829980	class II histocomp
40	54.1	79	7	D85794	hypothetical prote
40	54.1	194	7	G64026	[acyl-carrier-prot
40	54.1	601	Н	A55485	oligopeptidase (EC
40	54.1	601	7	G86840	oligoendopeptidase
40	54.1	644	7	S46746	hypothetical prote
39	52.7	102	~	PH1491	Ig heavy chain V r
39	52.7	119		PH1518	שו
39	52.7	119	~	PH1516	ס
39	52.7	119		PH1519	Ig heavy chain V r
39	52.7	123	(7	F48677	Ig heavy chain V-D
39	52.7	135	N	PH1494	g heavy
39	52.7	140	•	PH1488	Ig heavy chain V r
39	52.7	189	~	G97978	conserved hypothet

adenylate kinase (type II restrictio	probable acetyl-Co	type IIS restricti	hypothetical prote	hypothetical prote	hypothetical prote	hypothetical prote	tRNA-pseudouridine	probable hexosyltr	hypothetical prote	hypothetical prote	cellulase (EC 3.2.	endo-1,4-beta gluc	methyl-accepting c	hemagglutinin-neur
KIYMC	B71808	T43043	F64690	C90569	A64639	H71875	F64472	F70361	F71196	T51466	T29127	T52135	A86158	E82395	HNNZ80
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39 52.7 213					51.4	51.4	51.4		51.4	51.4		51.4	51.4		51.4

ALIGNMENTS

RESULT 1

BTCLTN	
tentoxilysin (EC 3.4.24.68) precursor - Clostridium tetani	
N;Alternate names: tetanus neurotoxin	
C;Species: Clostridium tetani	
C;Date: 31-Mar-1988 #sequence revision 31-Mar-1988 #text_change 09-Jul-2004	
C; Accession: A25689; A25757; A25194; B25194; A60759; S69348; S09364	
R; Eisel, U.; Jarausch, W.; Goretzki, K.; Henschen, A.; Engels, J.; Weller, U.; Hudel, M	Hudel, M
EMBO J. S, 2495-2502, 1986	
A; Title: Tetanus toxin: primary structure, expression in E. coli, and homology with bot	with bot
A; Reference number: A25689; MUID:87053814; PMID:3536478	
A; Accession: A25689	
A; Molecule type: DNA	
A;Residues: 1-1315 <eis></eis>	
A; Cross-references: UNIPROT: P04958; GB: X04436; NID: 940769; PIDN: CAA28033.1; PID: 940770	D:940770
R;Fairweather, N.F.; Lyness, V.A.	
Nucleic Acids Res. 14, 7809-7812, 1986	
A; Title: The complete nucleotide sequence of tetanus toxin.	
A;Reference number: A25757; MUID:87040747; PMID:3774547	
A; Accession: A25757	
A;Molecule type: DNA	
A;Residues: 1-1315 <pai></pai>	
A; Cross-references: GB: X06214; NID: 940773; PIDN: CAA29564.1; PID: 940774	
A; Experimental source: strain CN3911	
R; Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O.	
J. Bacteriol. 165, 21-27, 1986	
A; Title: Cloning, nucleotide sequencing, and expression of tetanus toxin fragment C in	ent C in

A; Reference number: A25194; MUID:86085672; PMID:3510187
A; Reference number: A25194; MUID:86085672; PMID:3510187
A; Molecule type: DNA
A; Molecule type: Drotein
A; Molecule type: Drotein
A; Residues: 865-894 < FR3>
R; Matsuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T.
B; Matsuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T.
A; Residues: 865-894 < FR3>
A; Title: Isolation, purification, and characterization of fragment B, the NH-2-terminal A; Recence number: A60759; MUID:90035436; PMID:2478476

Ajmolecule type: protein
Ajmolecule type: protein
Ajmolecule type: protein
Ajmolecule type: delay charaAjmolecule type: 461-475 cMATBjDemotz, S.; Lanzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G.
J. Immunol. 142, 394-402, 1989
AjTitle: Delineation of several DR-restricted tetanus toxin T cell epitopes.
Ajmolecule annotation; epitope regions profession and properties annotation; epitope regions BjSchiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta, B. Nature 359, 832-835, 1992
AjTitle: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteoly Ajkeference number: 827125; MUID:93063293; PMID:1331807
AjContents: annotation

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the nucleotide sequence was submitted to the EMBL Data Library, December 1992
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69.2%;
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Best Local Similarity 64.3%;
Matches 9; Conservative
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124 QYITSNSTFTGQTE 137
                                                                                                                                                                                                                                                                                                            50 YIKRNGKFVGTWEV 63
                                                                                                                                                                                                                                                                        2 YIKANSKFIGITEL 15
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nes 9, Conservative
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Best Local Similarity
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                                                                                                A;Start codon: GTG
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A;Gene: 84
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C; Becies: Mycobacterium phage L5
C; Becies: Mycobacterium phage L5
C; Becies: Mycobacterium phage L5
C; Accession: S31029
R; Donnelly-Wu, M.K.; Jacobs Jr., W.R.; Hatfull, G.F.
Mol. Microbiol. 7, 407-417, 1993
A; Title: Superinfection immunity of mycobacteriophage L5: applications for genetic trans
A; Reference number: S30949; MUID:93211283; PMID:8459767
A; Accession: S31029
A; Status: nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 1-66 cDON>
A; Cross-references: UNIPROT:Q05301; EMBL:Z18946; NID:g15859; PIDN:CAA79460.1; PID:e59702
                                                                                                                                          A; Molecule type: protein A; Molecule type: protein A; Molecule type: protein A; Molecule type: Dobes A; Molecule type: Dobes A; Molecule type: 2-31 cDEF.
C; Comment: The source of this protein was an extrachromosomal plasmid.
C; Comment: The precursor is cleaved by endogenous proteinase activity to form light (fra dual chains are not toxic when separated). The amino end of the heavy chain (fragment B) C; Comment: Pragment D forms inon channels in a lipid bilayer. Fragment C binds to garglid C; Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteolytic cleavage of sy
Ride Filippis, V.; Vangelista, L.; Schiavo, G.; Tonello, F.; Montecucco, C. Eur. J. Biochem. 229, 61-69, 1995
A;Title: Structural studies on the zinc-endopeptidase light chain of tetanus neurotoxin. A;Reference number: S69348; MUID:95262688; PMID:7744050
                                                                                                                                                                                                                                                                                                                                                                        C.Function:
A.Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
C.S.Superfamily: tetanus toxin
F.2-457/Product: tentoxylysin light chain (fragment B.C) #status predicted cTTL>
F.461-1815/Product: tentoxylysin heavy chain (fragment B.C) #status experimental cTTH>
F.461-1844/Domain: channel forming (fragment B) #status predicted cTXC>
F.865-1315/Domain: gangiloside binding (fragment C) #status predicted cTXC>
F.233,227/Binding site: zinc (His) #status predicted
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C;Species: Salmo salar (Atlantic salmon)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
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A;Reference mumber: 829980
A;Accession: S29982
A;Actus: preliminary
A;Molecule type: mRNA
A;Residues: 1-244 «HOR»
A;Cross-references: UNIPROT:Q31590; EMBL:X70166; NID:g64369; PID:g64370
C;Superfamily: class II histocompatibility antigen; immunoglobulin homol
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100.0%; Pred. No. 3.8e-05;
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Best Local Similarity 55.6%;
Matches 10; Conservative
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Best Local Similarity 100.0
Matches 15, Conservative
                                                                                                                     A; Accession: S69348
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C;Date: 06-Ja
C;Accession:
R;Hordvik, I.
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S31029
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Ribolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, J.; Ehrlagenome Res. 11, 731-753, 2001
A;Title: The complete genome sequence of the lactic acid bacterium Lactococcus lactis shakeference number: A86625; MUID:21235186; PMID:11337471
A;Accession: G86826
                                                                                                                                                                                                                                                                                            - Lactococcus lactis subsp. lactis
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C;Superfamily: Bscherichia coli ribosomal-protein-alanine N-acetyltransferase rimJ
C;Keywords: acyltransferase; coenzyme A
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C;Species: ateline herpesvirus 3
A;Variaty: strain 73
A;Variaty: strain 73
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 09-Jul-2004
C;Accession: T42976
R;Albrecht, J.C.; Fleckenstein, B.
B;Albrecht, J.C.; Fleckenstein, B.
A;Description: Primary structure of the herpesvirus ateles genome.
A;Reference number: Z22274
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(98626)
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A;Molecule type: DNA
A;Residues: 1-899 <ALLB.
A;Cross-references: UNIPROT: Q9YTK4; EMBL;AF083424; PIDN: AAC95587.1
A;Experimental source: strain 73
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2.5;
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Pred. No. 13;
1; Mismatches
Score 44; DB 2
Pred. No. 0.58;
                                                 2; Mismatches
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Pred. No. 3
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major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) (is C;Species: Plasmodium falciparum C;Species: Plasmodium falciparum C;Species: Plasmodium falciparum C;Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-Jul-2004 C;Accession: A54498 R;Peterson, M.G.; Coppel, R.L.; McIntyre, P.; Langford, C.J.; Woodrow, G.; Brown, G.V.; Mol. Biochem. Parasitol. 27, 291-302, 1988 A;Title: Variation in the precursor to the major merozoite surface antigens of Plasmodiu A;Reference number: A54498; MUID:88142999; PMID:2449612 A;Accession: A54498 A;Status: preliminary A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-1701 <PET>
A;Cross-references: UNIPROT:P13819, GB:M19143; NID:g160412; PIDN:AAA29653.1; PID:g160411
C;Superfamily: major merozoite surface antigen
C;Keywords: surface antigen
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A,Residues: 1-1104 <WEB1>
A,Residues: 1-1104 <WEB1>
A,Residues: 1-1104 <WEB1>
A,Cross-references: Unrivor: P04934; EMBL:X03831
R,Weber, J.L.; Sim, B.K.L.; Lyon, J.A.; Wolff, R.
Nucleic Acids Res. 16, 1206, 1988
A,Title: Werzozotte surface protein sequence from the Camp strain of the human malaria paragemence number: S06361; MUID:88143999; PMID:3278296
A,Accession: S06361
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A;Cross-references: ENBL:X03831
A;Cross-references: ENBL:X03831
C;Comment: The merozoite stages of different strains have strain-specific surface antige C;Comment: P. falciparum has three stages: sporozoite, merozoite, and gametocyte. The merozoite merozoite surface antigen
C;Superfamily: major merozoite surface antigen; tandem repeat
F;1-19/Domain: signal sequence #status predicted <SIG>F;20-1726/Product: major merozoite surface antigen #status predicted <MAT>F;67-87,91-96;100-105;109-120/Region: 3-residue repeats (S-G-T)
F;757-765/Region: 3-residue repeats (T-E-E)
F;133,272,501,567,638,827,839,924,944,990,1016,1114,1221,1613,1658/Binding site: carbobh
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NyAlternate names: 195K glycoprotein
NyAlternate names: 195K glycoprotein
CySpecias: 186-186 and alciparum
CyBate: 30-58p-1987 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004
CyAccession: A23386; 806361
KiWeber, J.L.; Leininger, W.M.; Lyon, J.A.
Nucleic Acids Res. 14, 3311-332, 1986
Ayritle: Variation in the gene encoding a major merozoite surface antigen of the human rakeference number: A23386; MUID:86205236; PMID:3517809
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F;20-1701/Product: major merozoite surface antigen #status predicted
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                                                                                   Length 1701;
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                                                                               DB 2;
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Pred. No. 31;
4; Mismatches
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1001 QFVKSNSKVITGLTE 1015
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                                                                   Query Match
Best Local Similarity 60.0%;
Matches 9; Conservative
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Best Local Similarity
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C;Species: Plasmodium falciparum
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 09-Jul-2004
C;Accession: A44865; 816752
Exp. Parasitol: 74, 381-389, 1952
Exp. Parasitol: 74, 381-389, 1952
A;Title: Plasmodium falciparum: the repetitive MSA-1 surface protein of the RO-71 isolat
A;Reference number: A44865; MUID:92275047; PMID:1592091
A;Retus: prediminary
A;Molecule type: DNA
A;Retus: prediminary
A;Molecule type: DNA
A;Retus: Dradues: 1-1086 AOLA>
A;Cross-references: UNIPROT:Q25961; EMBL:X61930
A;Experimental source: isolate RO-71
C;Gene: MSA
C;Superfamily: major merozoite surface antigen; tandem repeat
                         major merozoite gurface antigen precursor - malaria parasite (Plasmodium falciparum) (st NyAlternate names: 190K protein; polymorphic schizont antigen (Species: Plasmodium falciparum (Species: Plasmodium falciparum (Species: Plasmodium falciparum (Species: Plasmodium falciparum (Species: Plasmodium falciparum (Species: Plasmodium falciparum (Species: Plasmodium falciparum (Species: Plasmodium falciparum (Species: Plasmodium falciparum) (Species: Plasmodium falciparum) (Species: Plasmodium f
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J. Mol. Biol. 195, 273-287, 1987
A;Title: Allelic dimorphism in a surface antigen gene of the malaria parasite Plasmodium A;Accession: A26868 MUD:88011243; PMID:3079521
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C;Superfamily: major merozoite surface antigen
C;Keywords: surface antigen
F;I-19/Domain: signal sequence #status predicted <SIG>
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Pred. No. 19;
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C;Superfamily: major merozoite surface antigen
C;Keywords: surface antigen
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Similarity 60.0%;
9; Conservative
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983 QFVKSNSKVITGLTE 997
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Best Local Similarity 60.0
Matches 9; Conservative
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Best Local Similarity
Matches 9; Conserv
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A;Status: preliminary; not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-123 <TAGS of TAGS 
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Pred. No. 31;
4; Mismatches
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Pred. No. 15;
2; Mismatches
                                                                                                                                                                                                                                                    Score 41; DB:
Pred. No. 3.9;
0; Mismatches
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Best Local Similarity 50.0%;
Matches 7; Conservative 4
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                                                                                                                                                                                                                                                       55.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  57 YİKYNEKFKĞTİTL 70
                                                                                                                                                                                                                                                           Query Match 55.4
Best Local Similarity 64.3
Matches 9; Conservative
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291 KYIRTNKKFIG 301
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Best Local Similarity
Matches 7; Conserv
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A; Accession: G48677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: CAC2004
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C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: 19-May-1994 #sequence_revision 19-May-1994 #text_change 17-Mar-1999
C;Accession: 648677
R;Tassignon, J.; Brait, M.; Jamila, I.; Urbain, J.; Gottlieb, P.; Brown, A.; Hasemann, C
Proc. Natl. Acad. Sci. US. A. 90, 9508-9512, 1993
A;Title: Molecular characterization of monoclonal CRI-A-positive anti-arsonate antibodie
A;Reference number: A48677; MUID:94022404; PMID:8415731
                                                                                                                                                                                                                                                                               major merozoite surface antigen precursor - malaria parasite (Plasmodium falciparum) (st
C;Species: Plasmodium falciparum
C;Species: Dlasmodium falciparum
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 09-Jul-2004
C;Accession: A5948
R;Chang, S.P., Kramer, K.J.; Yamaga, K.M.; Kato, A.; Case, S.E.; Siddiqui, W.A.
Exp. Parasitol. 67, 1-11, 1988
A;Reference number: A45948; MUID:89005525; PMID:3049134
A;Accession: A45948
A;Accession: A45948
A;Accession: A45948
A;Cross-references: UNIPROT:025922; GB:M37213
A;Cross-references: UNIPROT:025922; GB:M37213
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C;Species: Drosophila melanogaster
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Accession: S38635
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-1333 <FRO>
A;Cross-references: UNIPROT:Q24262; EMBL:Z27119; NID:g415797; PID:g415798
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          Gaps
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R; Frommer, G.; Schuh, R.; Jdckle, H.
submitted to the EMBL Data Library, November 1993
A; Description: Localized expression of a novel micropia-like element in A; Reference number: S38635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
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Pred. No. 30;
3; Mismatches
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          Mismatches
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QFVKSNSKVITGLTE 1040
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Best Local Similarity 53.3
Matches 8; Conservative
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Matches 9; Conservative
                                                                       1 QYIKANSKFI-GITE
             Conservative
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                Matches
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A; Molecule type: DNA
A; Residues: 1-899 <ALB>
A; Residues: 1-899 <ALB>
A; Residues: 1-899 <ALB>
A; Cross-references: GB:X64346; NID:g60320; PIDN:CAA45686.1; PID:g60384
A; Cross-references: GB:X64346; NID:g60320; PIDN:CAA45686.1; PID:g60384
B; Albrecht, J.C.; Nicholas, J.; Biller, D.; Cameron, K.R.; Biesinger, B.; Newman, C.; W.
J; Ajricle. 66, 5047-5058, 1992
A; Title: Primary structure of the herpesvirus saimiri genome.
A; Reference number: A37309; MUID:9233688; PMID:1321287
A; Contents: annotation; protein-coding frames
A; Note: neither protein nor nucleotide sequence is given
C; Genetics:
A; Gene: 63
                                                                                                                                                                                                                                               A;Residues: 1-447 «KUR»
A;Cross-references: UNIPROT:Q97HK7; GB:AE001437; PIDN:AAK79963.1; PID:g15024986; GSPDB:C
A;Experimental source: Clostridium acetobutylicum ATCC824
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C;Species: saimiriine herpesvirus 1
A;Note: host Saimiri sciureus (common squirrel monkey)
C;Date: 16-Oct-1992 #sequence_revision 16-Oct-1992 #text_change 08-Oct-1999
C;Accession: G36812
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A;Description: Primary structure of the herpesvirus saimiri genome.
A;Reference number: A36806
A;Accession: G36812
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Length 123;
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A;Reference number: A64000; MUID:95350630; PMID:7542800
A;Accession: G64026
A;Status: nucleic acid sequence not shown; translation not shown
A;Status: nucleic acid
A;Actionser: DNA
A;Residues: 1-194 <TIGR>
A;Residues: 1-194 <TIGR>
A;Residues: UNIPROT:P43013; GB:U32816; GB:L42023; NID:g1574193; PIDN:AAC23013.1
A;Experimental source: strain Rd KW20
C;Punction:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oligopeptidase (EC 3.4.24.-) pepF [validated] - Lactococcus lactis
NiAlternate names: metalloendopeptidase
C;Species Lactococcus lactis
C;Species Lactococcus lactis
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: A55485; S49150
C;Accession: A55485; S49150
J; Chopin, A.; Chopin, A.; Chopin, M.C.; Gripon, J.C.
J; Biol. Chem. 269, 32070-32076, 1994
A;Title: Biochemical and genetic characterization of PepF, an oligopeptidase from Lactor A;Accession: A55485
A;Status: preliminary; translated from GB/EMBL/DDBJ
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A;Residues: 1-601 <RES>
A;Cross-references: UNIPROT:P54124; EMBL:Z32522; NID:g510139; PIDN:CAA83534.1; PID:g510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.Description: BC 3.4.24.-; oligopeptidase [validated, MUID:95096044]; hydrolyzes peptic
C,Superfamily: oligoendopeptidase F
C,Keywords: hydrolase; metalloproteinase
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C;Species: Lactococcus lactis subsp. lactis
C;Species: Lactococcus lactis subsp. lactis
C;Species: Lactococcus lactis subsp. lactis
C;Accession: G86840
R;Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenbach, J.; Ehrl
A;Title: The complete genome sequence of the lactic acid bacterium Lactococcus lactis s
A;Reference number: A86625; MUID:21235186; PMID:11337471
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A,Molecule type: DNA
A,Residues: 1-601 <STO>
A,Fesidues: 1-601 <STO>
A,Cross-references: UNIPROT: Q9CEV7; GB:AE005176; PID:g12724746; PIDN:AAK05825.1; GSPDB:
A,Experimental source: strain IL1403
                                                                                                                                                                                                                                                                                          A, Description: catalyzes hydrolysis of the phosphopantetheine residue from holo-acyl-ca
C, Superfamily: acyl carrier protein phosphodiesterase
C, Keywords: phosphoric diester hydrolase
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Pred. No. 9.7;
4; Mismatches
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C,Superfamily: oligoendopeptidase F
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284 RYIELRKKILGITDL 298
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Best Local S:
Matches 8
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R; Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D.J.; Mayhew iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K.; Apodaca, Nature 409, 529-533, 2001

A; Title: Genome sequence of enterchemorrhagic Escherichia coli O157:H7.

A; Reference number: A85480; MUID:21074935; PMID:11206551

A; Reference number: D85794

A; Status: preliminary

A; Reseasion: D85794

A; Residues: 1-79 < STO>

A; Cross-references: UNIPROT:Q8X4G6; GB:AE005174; NID:g12515873; PIDN:AAG56816.1; GSPDB:G

A; Genetics: A; Generics: strain O157:H7, substrain EDL933

C; Genetics: A; Generics: STO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein Z2873 [imported] - Escherichia coli (strain O157:H7, substrain EDLS
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Ribordvik. 1.
Ribordvik. 1.
A;Reference number: S29980
A;Reference number: S29980
A;Reference number: S29980
A;Reture: preliminary
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1.245 cHOR>
A;Cross-references: UNIPROT:031591; EMBL:X70167; NID:g64371; PID:g64372
C;Superfamily: class II histocompatibility antigen; immunoglobulin homology
                                                                                                                                                                                                                                                                                             class II histocompatibility antigen - Atlantic salmon
C;Species: Salmo salar (Atlantic salmon)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 09-Jul-2004
C;Accession: S29980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Bscherichia coli
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 09-Jul-2004
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50.0%; Pred. No. 3.8;
tive 3; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 QYIKANS --- KFIGITEL 15
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124 QYITSNATFTGLSE 137
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QYLHTKSGFLGITD 65
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Best Local Similarity 44.49
Matches 8; Conservative
                                                         1 OYIKANSKFIGITE
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Best Local Similarity
Matches 7; Conserv
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R;Giusti, A.M.; Manser, T.
J. Exp. Med. 177, 797-809, 1993
A;Title: Hypermutation is observed only in antibody H chain V region transgenes that hav d for somatic mutation.
A;Reference number: PH1482; MUID:93171820; PMID:8436910
A;Accession: PH1518
A;Status: translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ig heavy chain V region (clone X41-4) - mouse (fragment)

Species: Musuculus (house mouse)
C;Species: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1516
C;Accession: PH1516
C;Accession: PH1516
C;Accession: PH1516
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C;Accession: PH1516
C;Accession: PH1
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D. Exp. Med. 177, 797-809, 1993
A.Title: Hypermutation is observed only in antibody H chain V region transgenes that have for somatic mutation.
A.Reference number: PH1482; MUID:93171820; PMID:8436910
A.Accession: PH1519
A.Status: translation not shown
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C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
C;Accession: PH1519
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C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;21-104/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Superfamily: immunoglobulin V region; immunoglobulin homology
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A;Reference number: PH1482; MUID:93171820; PMID:8436910
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Pred. No. 8.9;
0; Mismatches
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Pred. No. 8.9;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Keywords: heterotetramer; immunoglobulin F;21-104/Domain: immunoglobulin homology <IMM>
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A,Residues: 1-119 <GIU>
A,Experimental source: hybridoma cell
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A,Residues: 1-119 <GIU>
A,Experimental source: hybridoma cell
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A;Residues: 1-119 <GIU>
A;Experimental source: hybridoma cell
C;Ganetics:
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64.3%;
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Best Local Similarity 64.3%;
Matches 9; Conservative (
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A;Status: translation not shown
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Best Local Similarity
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Albertiption: The sequence of S. cerevisiae cosmid 8179.
Albertiption: The sequence of S. cerevisiae cosmid 8179.
Albertier S46746
Albertier Lype: DNA
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Albertier Left < DUZ>
Alcross-references: UNIPROT:P38694; EMBL:U00062; NID:g488162; PID:g488180; GSPDB:GN00008
Clenetics:
Alcross-references: SGD:S0001081
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R; Giusti, A.M.; Manser, T.
B. Exp. Med. 177, 797-809, 1993
A; Title: Hypermutation is observed only in antibody H chain V region transgenes that hav d for somatic mutation.
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C;Species: Mus musculus (house mouse)
C;Date: 03.Feb-1994 #sequence_revision 03.Feb-1994 #text_change 07-May-1999
C;Accession: PHIS18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Species: Saccharomyces cerevisiae
C;Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-Jul-2004
C;Accession: S46746
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C;Species: Mus musculus (house mouse)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 07-May-1999
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A;Reference number: PH1482; MUID:93171820; PMID:8436910

A;Accession: PH1491

A;Status: translation not shown

A;Residues: L102 <GIV>
A;Residues: 1-102 <GIV>
C;Superfamily: immunoglobulin V region; immunoglobulin homology

C;Reywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 54.1%; Score 40; DB 2; Length 644; Best Local Similarity 60.0%; Pred. No. 33; Matches 9; Conservative 1; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                       hypothetical protein YHR039c - yeast (Saccharomyces cerevisiae)
N;Alternate names: hypothetical protein H8179.19
              DB 2; Length 601;
31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 102;
                                                                                       Indels
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                                                                                       4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A,Cross-references: SGD:buvuvut
A,Map position: 8R
C,Superfamily: NAD-dependent aldehyde dehydrogenase
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                                                                                    4; Mismatches
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Pred. No.
                  Score 40;
Pred. No.
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              Query Match
Best Local Similarity 46.7%;
Matches 7; Conservative
                                                                                                                                                                                                     :||:
284 RYIELRKKILGITDL 298
                                                                                                                                                         1 QYIKANSKFIGITEL 15
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A;Introns: 3/1
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;21-104/Domain: immunoglobulin homology <IMM>
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ngth 119;		Indels
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Score 39; DB 2;	Pred. No. 8.9;	0; Mismatches
52.7%;	Best Local Similarity 64.3%; Pred. No. 8.9;	; Conservative
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² YIKANSKFIGITEL 15 ||| | | | | | | 63 YIKYNEKFKGKTTL 76

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Search completed: January 25, 2005, 06:09:22 Job time: 23.9167 secs

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Q61v51 photobacter
Cag18824 photobact
Cag22944 photobact
Cag23599 photobact
Q9ykk ateline her
Q2591 plasmodium
Q764K9 plasmodium
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13-AUG-1987 (Rel. 05, Last sequence update)
13-AUG-1987 (Rel. 45, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Tetanus toxin precursor (RC 3.4.24.68) (Tentoxylysin) (Contains:
Tetanus toxin light chain (Tetanus toxin chain (Tetanus toxin chain H)].
Name=tetX; OrderedLocusNames=ctp60;
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                    Clostridium tetani.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Shumin Z., Dianliang L.;
Submitted (JUN-2011) L.;
Submitted (JUN-2011) L.;
Submitted (JUN-2014) L.;
RMBL; AF389424, AAK72564.2;
CO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0006508; P:perceolysis and peptidolysis; IEA.
InterPro; IPR011591; Botulinum.
InterPro; IPR011591; Botulinum.
InterPro; IPR008985; Conallike lec_gl.
InterPro; IPR008985; Conallike lec_gl.
InterPro; IPR008035; Peptidase MZ7.
InterPro; IPR008035; Peptidase MZ7.
InterPro; IPR008035; Peptidase MZ7.
Pfam; PF01742; Peptidase MZ7.
Pfam; PF00760; BONTOXILVSIN.
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          Q6LV51
CAG18824
CAG23559
Q8H8F3
Q8H8F3
Q257TK4
Q259G1
MSP1 PLAF3
Q764L0
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01-DEC-2001 (TrEMBLrel. 19,
01-MAR-2004 (TrEMBLrel. 26,
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 NCBI_TaxID=1513;
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P04958;
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Q81518 enterocococu
Q31585 salmo salar
Q95hy1 salmo salar
Q95hy1 salmo salar
Q95hy1 salmo salar
Q95hy1 salmo salar
Q95hy3 galmo salar
Q05301 mycobacteri
Q9xg37 guillardia
Q31578 salmo salar
Q9xg37 guillardia
Q9xg37 guillardia
Q9xg37 guillardia
Q9xg37 guillardia
Q9xg4 mus musculu
Q9crv4 mus musculu
Q9cyd2 mus musculu
Q9cyd2 mus musculu
Q61hk1 photobacter
Cag23229 photobact
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0619m3 photobacter
0619m3 photobacter
Cag23341 photobact
Cag23547 photobact
Cag23557 photobact
Cag23568 photobact
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                                                                           January 25, 2005, 06:04:08; Search time 49.5833 Seconds (without alignments) 174.063 Million cell updates/sec
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          GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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CAG23229
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PLASMID=75 Kbp;
MBDLINE=87053814; PubMed=3536478;
Eisel U., Jarausch W., Goretzki K., Henschen A., Engels J., Weller U.,
Hudel M., Habermann E., Niemann H.;
"Tetanus toxin: primary structure, expression in E. coli, and homology
with botulinum toxins ";
EMBO J. 5:2495-2502(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schiavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P., Dasgupta B.R., Montecucco C.; Tetanus and boculinum-B neurotoxins block neurotransmitter release by proteclytic cleavage of synaptobrevin.";
                                                                                                                                                                                                                                                                                                                                                                                                                         Fairweather N.F., Lyness V.A., Pickard D.J., Allen G., Thomson R.O., "Cloning, nucleotide sequencing, and expression of tetanus toxin fragment C in Escherichia coli.";
J. Bacteriol. 165:21-27(1986).
[5]
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"Arrangement of disulfide bridges and positions of sulfhydryl groups
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MEDLINE=97475217; PubMed=9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey W.F., Schmidt J.J.,
                                                                                                                                                                                                                                                                                                                                             "The genome sequence of Clostridium tetani, the causative agent of tetanus disease.",
                                                                                                                                                                                                                                                                           STRAIN=Massachusetts / E88; PLASMID=pE88;
MEDLINE=22457253; PubMed=12552129; DOI=10.1073/pnas.0335853100;
MEDLINE=22457253; PubMed=12552129; DOI=10.1073/pnas.0335853100;
Baruegqemann H., Bacumer S., Fricke W.F., Wezer A., Liesegang H., Decker I., Herzberg C., Martinez-Arias R., Merkl R., Henne A., Gottschalk G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Tetanus toxin is a zinc protein and its inhibition of
neurotransmitter release and protease activity depend on zinc.";
EMBO J. 11:3577-3583(1992).
Plasmid pE88, and Plasmid 75 Kbp.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Krieglstein K.G., Henschen A.H., Weller U., Habermann E.;
"Limited proteolysis of tetanus toxin. Relation to activity and
identification of cleavage sites.";
Eur. J. Biochem. 202:41-51(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schiavo G., Poulain B., Rossetto O., Benfenati F., Tauc L.,
                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=CN1911; PLASMID=75 Kbp;
MEDLINE=87040747; PubNed=3774547;
Fairweather N.F., Lyness V.A.;
"The complete nucleotide sequence of tetanus toxin.";
Nucleic Acids Res. 14:7809-7812(1986).
                                                                                                                                                                                                                                                                                                                                                              tetanus disease.";
Proc. Natl. Acad. Sci. U.S.A. 100:1316-1321(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PARTIAL SEQUENCE, AND DISULFIDE BONDS. MEDLINE=90201034; Pubmed=2108021;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=93063293; PubMed=1331807;
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MEDLINE=86085672; PubMed=3510187;
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MEDLINE=92037649; PubMed=1935979;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in tetanus toxin.";
Eur. J. Biochem. 188:39-45(1990)
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 742-1314 FROM N.A.
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                                                                        SEQUENCE FROM N.A.
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                                              NCBI_TaxID=1513;
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ib.ch).
                             neurotoxin.";
Nat. Struct. Biol. 4:788-792(1997).
-!- FUNCTION: Tetamus toxin acts by inhibiting neurotransmitter
release. It binds to peripheral neuronal synapses, is internalized
and moves by retrograde transport up the axon into the spinal cord
where it can move between postsynaptic and presynaptic neurons. It
inhibits neurotransmitter release by acting as a zinc
endopeptidase that catalyzes the hydrolysis of the 76-Gln-|-Phe-77
bond of synaptobrevin-2.
                                                                                                                                                                                                                                                                                                                                                                                     synaptobrevin 2.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: The precursor polypeptide is subsequently cleaved to yield subchains L and W. These remain linked by a disulfide br and are non-toxic after separation.

MISCELLANEOUS: The C-terminus of the heavy chain binds to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tetanus toxin light chain.
Tetanus toxin heavy chain.
Zinc (catalytic) (By similarity)
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Sinc (catalytic) (By similarity)
Potential.
Potential.
"Structure of the receptor binding fragment HC of tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ganglioside receptors.
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EMBL; X06214; CAA2964.1; ---
EMBL; AES28097; AAA23464.1; ---
FIRE, ALS589; BTCLTN.
FIRE, AABS89; BTCLTN.
FIRE, AABS89; ATCLTN.
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                    The dimer (By similarity).

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The SUBUNIT: Homodimer (By similarity).

The SUBCELDIMAR IOCATION: Cytoplasmic (By similarity).

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=22250857; PubMed=12663927; DOI=10.1126/science.1080613; Paulsen I.T., Banerjei L., Myers G.S.A., Nelson K.E., Seshadri R., Read T.D., Fouts D.E., Eisen J.A., Gill S.R., Heidelberg J.F., Tettelin H., Dodson R.J., Umayam L.A., Brinkac L.M., Beanan M.J., Daugherty S.C., DeBoy R.T., Durkin S.A., Kolonay J.F., Madupu R., Nelson W.C., Vamathevan J.J., Tran B., Upton J., Hansen T., Shetty J., Khouri H.M., Utterback T.R., Radune D., Ketchum K.A., Dougherty B.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -i - CATALYTIC ACTIVITY: ATP + L-alanine + tRNA(Ala) = AMP + diphosphate + L-alanyl-tRNA(Ala).
-i - SUBCELLULAR LOCATION: Cytoplasmic.
-i - SIMILARITY: Belongs to class-II aminoacyl-tRNA synthetase family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Enterococcus faecalis (Streptococcus faecalis).
Bacteria; Firmicutes; Lactobacillales; Enterococcaceae; Enterococcus.
NCBI_TaxID=1351;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
    genome sequence of Blochmannia floridanus: comparative analysis
                                                 c. Natl. Acad. Sci. U.S.A. 100:9388-9393(2003).
CATALYTIC ACTIVITY: 2-phospho-D-glycerate = phosphoenolpyruvate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-MAR-2004 (Rel. 43, Last sequence update)
1-0CT-2004 (Rel. 45, Last annotation update)
Alanyl-tRNA synthetase (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)
Name-alaS; OrderedLocusNames=EP1379;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2; Length 447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3; Indels
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SEQUENCE 447 AA; 49005 MW; 465B69C3273C7AC4 CRC64;
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Pred. No. 11;
5; Mismatches
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Science 299:2071-2074(2003).
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416 EFLKDNSKFYGVNEI 430
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STRAIN=V583 / ATCC 700802;
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                                of reduced genomes.
                                                   Proc. Natl.
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Q835J8;
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SYA ENTFA
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Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
Enterobacteriaceae; ant endosymbionts; Candidatus Blochmannia.
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Latorre A., Rausell C., Kamerbeek J., Gadau J., Hoelldobler B.,
van Ham R.C.H.J., Gross R., Moya A.;
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01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
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MEDLINE=22784745; Pubmed=12886019;
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100.0%; Pro
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Best Local Similarity
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A Langefors A., Lohm J., Von Schantz T.;

Langefors A., Lohm J., Von Schantz T.;

Allelic polymorphism in MHC class II B in four populations of Allelic polymorphism in MHC class II B in four populations of Allelic polymorphism in MHC class II B in four populations of Allelic polymorphism in MHC class II B in four populations of Called C
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Dorschner M.O. Duris T., Phillips R.B.;

L Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.

L Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF130026; AAD20889.1; -.

EMBL; AF130026; AAD20889.1; -.

EGO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0016021; F:MHC Class II receptor activity; IEA.

GO; GO:0019884; P:antigen presentation, exogenous antigen, IEA.

EGO; GO:0006955; P:immune response; IEA.

InterPro. IPR00035; MHC II beta.

R ProDom; PD000695; MHC II beta; 1.

R ProDom; PD000328; MHC II beta; 1.

R ProDom; MHC II beta; 1.

R ProDom; MHC II beta; 1.

R ProDom; PD000328; MHC II beta; 1.
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Actinopterygii, Neopterygii, Teleostei, Euteleostei,
Protacanthopterygii, Salmoniformes, Salmonidae, Salmo.
                    Salvelinus namaycush (lake trout).
Wataryota; Metacoa; Chordeta; Craniata; Vertebrata; Buteleostomi; Actinopterygii, Neopterygii; Teleostei; Buteleostei; Protacanthopterygii; Salmoniformes; Salmonidae; Salvelinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 44.5; DB 2; Length 71; Pred. No. 3.3;
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Pred. No. 4;
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O1-DEC-2001 (TrEMBLrel. 19, Last se
01-MAR-2004 (TrEMBLrel. 26, Last an
MHC class II B antigen (Fragment).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 OYIKANS --- KFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Salmo salar (Atlantic salmon).
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55.6%;
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Matches 10; Conservative
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                                                                                                        NCBI_TaxID=8040;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Grimholt U., Olasker I., de Vries Lindstrom C., Lie O.; Submitted (CT-1993) to the EMBL/GenBank/DDBJ databases.

EMBL; L29453; AA449591.7.; -
GO; GO:0016021; C:integral to membrane; IEA.
GO; GO:0019884; P:antigen presentation, exogenous antigen; IEA.
GO; GO:0019886; P:antigen presentation, exogenous antigen; IEA.
GO; GO:0019886; P:antigen processing, exogenous antigen via M. .; IEA.
GO; GO:0019886; P:antigen processing, exogenous antigen via M. .; IEA.
FO; GO:0019886; P:antigen processing, exogenous antigen via M. .; IEA.
GO; GO:001988; MHC II beta.
Pfam; PP00059; MHC II beta.
Probom; PD000328; MHC II beta.

Glycoprotein; MHC II; Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                     PRINTS; PRO0980; TRNASYNTHALA.
TIGREAMS; TIGR00344; alaS; 1.
PROSITE; PS50860; AA_TRNA_LIGASE_II_ALA; 1.
Aminoacyl-tRNA synthetase; ATP-bInding; Complete proteome; Ligase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 01, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Salmo salar (DB02) MHC class II beta 1 (Fragment).
Salmo salar (Atlantic salmon).
Salmo salar (Atlantic salmon).
Salmo salar (Atlantic salmon).
Fratanopterygii, Neopterygii; Teleostei; Buteleostei;
Protacanthopterygii, Salmoniformes; Salmonidae; Salmo.
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                                                                                                                                                                                                                                                                                                                                               DB 1; Length 880,
                                                                                                                                                                                                                                                                                                                                                                                             3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                       97887 MW; EF23ED1229B6683F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60 AA; 6776 MW; 5D4F3449060940E2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. 12, Created)
(TrEMBLrel. 12, Last sequence update)
(TrEMBLrel. 24, Last annotation update)
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3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
                               TIGR; EF1379; -.
HAMAP; MF_00036; -; 1.
InterPro; IPR003136; Pesterase DHHA1.
InterPro; IPR002318; tRNA-synt_2c.
InterPro; IPR006193; tRNA_synt_Ala.
R Pfam; PF02272; DHHA1; 1.
R Pfam; PF01411; tRNA-synt_Cc; 1.
                                                                                                                                                                                                                                                                                                                                               62.2%; Score 46; 69.2%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
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01-NOV-1999 (TrEMBLrel. 12, Crea
01-NOV-1999 (TrEMBLrel. 12, Last
01-JUN-2003 (TrEMBLrel. 24, Last
MHC class II beta I (Fragment).
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16 EYIRFNSTVGKFVGYTEL 33
                  EMBL; AE016951; AA081170.1;
TIGR; EF1379; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 55.6%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 OYIKANS --- KFIGITEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                        3 IKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 69.2
Matches 9, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                Protein biosynthesis.
                                                                                                                                                                                                                                                                                                           880 AA;
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SEQUENCE
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Q9XRJ9
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Q31585
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MEDLINE-93170890; PubMed-8436418;
HOTAVIX I., Grimholt U., Fosse V.M., Lie Y., Endresen C.;
HOTAVIX I., Grimholt U., Fosse V.M., Lie Y., Endresen C.;
HOTALDS and sequence analysis of CDNAs encoding the MHC class II a-
chain in Atlantic salmon, Salmo salar.";
Immunogenetics 37:437-441(1993).
EMBL, X70166; CAA49725.1;
PIR; S29982; BS9982.
HSSP; P04228; IES0.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Salmo salar (Atlantic salmon).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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          exogenous antigen via M.
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                                                                                                                                                                                                                                                                   Score 44.5; DB 2; Length 86;
Pred. No. 4;
3; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO; GO: 0016025; P: imembrane; IEA.
GO; GO: 0016025; P: imembrane; IEA.
GO; GO: 0006955; P: imemne response; IEA.
InterPro: IPR007159; Ig c1.
InterPro: IPR007359; Ig c1.
InterPro: IPR00359; MHC_II_beta.
InterPro: IPR00359; MHC_II_beta.
InterPro: IPR00358; MHC_II_beta.
InterPro: IPR00407; IGc1; I.
IPR00407; IGc1; I.
IPR03ITE; PS50835; IG_IKE; 1.
IPR05ITE; PS50835; IG_IKE; 1.
IRR05ITE; PS50835; IG_IKE; 1.
IRR05ITE; PS50835; IG_IKE; 1.
IRR05ITE; IRR05ITE; IG_IKE; 1.
IRR05ITE; IRR05ITE; IG_IKE; 1.
IRR05ITE; IRR05ITE; IG_IKE; 1.
IRR05ITE; IRR05ITE; IG_IKE; 1.
IRR05ITE; IRR05ITE; IG_IKE; 1.
IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR05ITE; IRR0
                                                                                                                                                                                                               86 AA; 9912 MW; E5097729F681F149 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation update)
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(Rel. 28, Last sequence update)
(Rel. 44, Last annotation update)
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Created)
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                                                                                                                                                                                                                                                                   60.1%;
55.6%;
                                                                                                                                                                                                                                                                                                                                                                                                        33 EYIRFNSTVGKFVGYTEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1996 (TrEMBLrel. 01, 01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                     Query Match
Query Match
Beet Local Similarity 55.00,
Beet Local Similarity 55.00,
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Name=Mhc-Sasa class II B;
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Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
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01-FEB-1994
01-FEB-1994
05-JUL-2004
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VG84 BPML5
ID VG84_BPML5
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Q31590;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=21608277; PubMed=11742552;
Landry C., Bernatchez L.;
"Comparative analysis of population structure across environments and
geographical scales at major histocompatibility complex and
microsatellite loci in Allanic salmon (Salmo salar).";
Mol. Ecol. 10:2525-2539(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Actinopterygii, Neopterygii; Teleostei, Buteleostei, Protacanthopterygii; Salmoniformes, Salmonidae, Salmo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Actinopterygii, Neopterygii, Teleostei, Euteleostei,
Protacanthopterygii, Salmoniformes, Salmonidae, Salmo.
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GO; GO:0016021; C:integral to membrane; IEA.

GO; GO:0018021; E:integral to membrane; IEA.

GO; GO:0018984; P:mHC class II receptor activity; IEA.

GO; GO:0019984; P:antigen processing, exogenous antigen; IEA.

GO; GO:0019886; P:antigen processing, exogenous antigen; IEA.

GO; GO:0019886; P:immune response; IEA.

InterPro; IPR00035; P:immune response; IEA.

ProDom; PD000328; MHC_II_beta,

ProDom; PD000328; MHC_II_beta; 1.

RoDom; PD000328; MHC_II_beta; 1.

RoDom; PD000328; MHC_II; Transmembrane.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85 AA; 9743 MW; 3214E01AD1B66AC5 CRC64;
                                                                                                                                                                                                    01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DRA-2004 (TrEMBLrel. 26, Last annotation update)
MHC class II beta chain (Fragment).
Salmo salar (Atlantic salmon).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
MHC class II B antigen (Fragment).
                                                                                                                                                           85 AA
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:||: || ||:| |||
EYIRFNSTVGKFVGYTEL 50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 55.6
Matches 10; Conservative
                                                                                                                                                           PRELIMINARY;
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                                                                                                       RESULT 8
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Gene 84 protein (GP84)

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Bolotin A., Wincker P., Marger S., Jaillon O., Malarme K., Weissenbach J., Ehrlich S.D., Sorokin A., "The complete genome sequence of the lactic acid bacterium Lactococcus lactis sp. lactis ILI403."; Genome Res. 11:731-753(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us lactis (subsp. lactis) (Streptococcus lactis).
Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus.
                                                                                                                                                                       Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; G86826, G86826.
GO; GO:0004145; F:diamine N-acetyltransferase activity; IEA
GO; GO:0016740; F:transferase activity; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 43.5; DB 2; Length 67; Pred. No. 4.8;
                                                                                                                                                                                                                                                                                            Grinholt U., Olsaker I., de Vries Lindstrom C., Lie O.;
Submitted (OCT-1993) to the EMBL/GenBank/DDBJ databases
EMBL; L24929; AAA49590.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21022 MW; 6DBD148524C0DF3C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42771AEDBABA6626 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUNAR-2004 (TrEMBLrel. 26, Last annotation update)
Spermidine acceyltransferase (EC 2.3.1.57).
Name=yqfF; OrderedLocusNames=LL1615;
                                                                         01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-UUN-2003 (TrEMBLrel. 24, Last annotation update)
Salmo salar (DBO3) MHC class II beta I (Fragment).
Salmo salar (Atlantic salmon).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                      67 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58.1%; Score 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Interpro, IPR000182, GCNSacetyl trans. Pfam; PF00583; Acetyltransf_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Glycoprotein; MHC II; Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=21235186; PubMed=11337471;
                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lactococcus lactis (subsp. lactis)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro, IPR000353; MHC II beta. Pfam; PF00969; MHC II beta; I. ProDom; PD000328; MHC II beta; I.
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50.0%;
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                                      PRELIMINARY;
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                                                         Q31578;
01-NOV-1996
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RESULT 13
Q31578
ID Q3157
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                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                       Hatfull G.F., Sarkis G.J.;
"DNA sequence, structure and gene expression of mycobacteriophage L5:
a phage system for mycobacterial genetics.";
Mol. Microbiol. 7:395-405(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=20087226; PubMed=10618395; Zauner S., Fraunholz M., Wastl J., Penny S.L., Beaton M., Cavalier-Smith T., Maier U., Douglas S.; Cavalier-Smith T., Maier U., Douglas S.; Chloroplast protein and centrosomal genes, a tRNA intron, and odd telomeres in an unusually compact eukaryotic genome, the cryptomonad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Douglas S., Zaurer S., Fraunholz M., Beaton M., Penny S., Deng L., Wu X., Reith M., Cavalier-Smith T., Maier U.; The highly reduced genome of an enslaved algal nucleus."; Nature 410:1091-1096 (2001).

EMBL, AJ010592; CAB40403.1; -.
  Mycobacteriophage L5.
Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
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Pred. No. 3.8;
2; Mismatches 4; Indels
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SEQUENCE 546 AA; 66218 MW; 7303950F632BE6F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein.

Guillardia theta (Cryptomonas phi).

Eukaryota, Cryptophyta, Cryptomonadaceae, Guillardia.

NCBI_TaxID=55529;
                                                                                                                                                                                                                                                                                                                                                                                                                                     66 AA; 7424 MW; 9C7104C7A4FA74A5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleomorph.";
Proc. Natl. Acad. Sci. U.S.A. 97:200-205(2000)
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50.0%; Pred. No. 30;
cive 6; Mismatches
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MEDLINE=21223349; PubMed=11323671;
                                                                                                                    MEDLINE=93211282; PubMed=8459766;
                                                                                                                                                                                                                                                                                                                                                                                            EMBL; Z18946; CAA79460.1; -. PIR; S31029; S31029.
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01-NOV-1999 (TrEMBLrel. 12,
01-OCT-2003 (TrEMBLrel. 25,
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445 FIKSNSRFMRLTEI 458
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50 YIKRNGKFVGTWEV 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 57.1
Matches 8; Conservative
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Best Local Similarity
7; Conserve
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                                                       NCBI_TaxID=31757;
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SEQUENCE FROM N.A.
STRAIN-ECSPEL(60; TISSUE=Head;
MEDLINE=20499374; PubMed=1102159;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Komno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN=CS7BL/6J; TISSUE=Head;
MEDLINE=20530913; PubMed=11076861;
Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-WAR-2003 (TrEMBLrel. 23, Last sequence update)
01-WAR-2004 (TrEMBLrel. 26, Last annotation update)
01-MAR-2104 (TrEMBLrel. 26, Last annotation update)
11 adays embryo head cDNA, RIKEN full-length enriched library, clone:3110030A04 product:CED-6 PROTEIN homolog.
Name=Gulp1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus muscúlus (Mouse).
Sukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Functional annotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                                                                                           58.1%; Score 43; DB 2; Length 252; 57.1%; Pred. No. 22; ive 2; Mismatches 4; Indels
        (FEB-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                       4D5A59FF47363948 CRC64;
                                                                                         IEA
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STRAIN-C57BL/6J; TISSUE-Head;
MEDLINE-99279253; Pubmed-10349636;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         291 AA.
                         EMBL, AF109874, AAD37103.1,
GO, GO:0003677; F:DNA binding; IEA.
GO, GO:0008170; F:N-mechyltransferase act
GO; GO:0008100; F:N-mechyltransferase act
InterPro; IPR002295; D21N6 mitrase.
InterPro; IPR002295; D21N6 mitrase.
InterPro; IPR002991; N6/N4 Miase.
Pfam; PF01555; N6 N4 Miase.
PRINTS; PR00508; S21N4MTFRASE.
PRINTS; PR00508; S21N4MTFRASE.
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STRAIN-CSTBL/60; TISSUE-Head;
MEDIJNE-2108560; PubMed=11217851;
RIKEN FANTOM CONSORTIUM;
                                                                                                                                                                                                                                                                                                                                    252 AA; 29357 MW;
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STRAIN=C57BL/6J; TISSUE=Head;
The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | :||| | :| ||
| QVLKANMKIVGATE 143
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nes 8; Conservative
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                                                                                                                                                                                                                                                                                                          Methyltransferase.
SEQUENCE 252 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2001
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                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Identification of four loci isolated from two Streptococcus thermophilus phage genomes responsible for mediating bacteriophage resistance.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptococcus thermophilus bacteriophage 7201.
Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae.
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Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [1] SEQUENCE FROM N.A. SEQUENCE FROM N.A. Seegers J.F.M.L., Fitzgerald van Sinderen D., van de Guchte M., Seegers J.F.M.L., Fitzgerald Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 250;
                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=20088830; PubMed=10620678;
Stanley E., Walsh L., van der Zwet A., Fitzgerald G.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         250 AA; 28744 MW; 725EA3B2B56B0D7F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       activity; IEA
                                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
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(TrEMBLrel. 12, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
                            3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 43; DB 2;
Pred. No. 22;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             252 AA
Pred. No. 16;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEMS MICROBIOL. Lett. 182:271-277 (2000).

EMBL, AF145054; AAF43506.1; -

GO, GO:00003677; F:DNA binding; IEA.

GO; GO:0008170; F:DNA methyltransferase acti
GO; GO:0006306; P:DNA methylation; IEA.

INTERPRO; IPR001295; D2ING mffrase.

INTERPRO; IPR001091; Met trans CN4.

INTERPRO; IPR001091; Met krans CN4.

PRINTS; PR00508; S2INÁMTERASE.

PRINTS; PR00508; SZINÁMTERASE.
                                                                                                                                                                                                                                                                                                                                    Created)
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69.2%;
                                                                                                                                                                                                                                                                                                                               01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2000 (TrEMBLrel. 15, 01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 QYIKANSKFIGITE 14
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Best Local Similarity 57.1.
Best Local Similarity 57.1.
Conservative
                                                                                   3 IKANSKFIGITEL 15
                                                                                                                                       65 iEANDTFIGIVEL 77
                            9; Conservative
                                                                                                                                                                                                                                                                              PRELIMINARY;
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  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=112023;
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         van Sinderen D.;
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01-OCT-2003
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Q9XJE8;
                                                                                                                                                                                                                                                                              Q9MCL7
                                                                                                                                                                                                                       RESULT 15
Q9MCL7
                         Matches
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SEQUENCE FROM N.A.
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                                                                                                                                           SEQUENCE FROM N.A.

C STRAIN-CS7BL/63; IISSUE-Head;
A Adachi U., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
Adachi U., Aizawa K., Akahira S., Fukuda S., Fukunishi Y., Furuno M.,
A rakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
A Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
A Matsuyama T., Kato H.,
A Kawai U., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
A Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
A Matsuyama T., Miyazaki A., Nishi K., Nomura K., Sakai R., Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
A Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
Muramatsu M., Hayashizaki Y.; Fukulishi A., Yoshida K., Yoshino M.,
Bubmitted (JUL-2000) Lo the BMEL/GenBank/DDBJ databases.
R EMBL, AKOI4099; BAB29151.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Mammary tumor metastatized to lung. Tumor arose spontaneously, MEDINE=22388257; PubMed=12477932; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Toshiyuki S., Carainci P., Prange C., Brownstein M.J., Usdin T.B., Toshiyuki S., Carainci P., Prange C., Brownstein M.J., Wedlen D.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunarane P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Samamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Pujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J. Chazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y., sequencing pipeline with 384 multicapillary sequencer.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; DB 2; Length 291; . 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; Indels
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32802 MW; 91FF3F41CD0BC6F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SMART; SMO0462; PTB; 1.
PROSITE; PS00687; ALDEHYDE_DEHYDR_GLU; UNKNOWN_1.
PROSITE; PS0179; PD15, 1.
SEQUENCE 291 AA; 32802 MW; 91FF3F41CD0BC6F2 C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; Mismatches
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Interpro; IPR002086, Aldehyde_dehydr.
Interpro; IPR01036; Pt related.
Interpro; IPR006020; PTB_PID.
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01-OCT-2002 (TrEMBLrel. 22,
01-OCT-2002 (TrEMBLrel. 22,
01-MAR-2004 (TrEMBLrel. 26,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 YIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                      MGD; MGI:1920407; Gulp1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                      Q02410; 1AQC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gulpi protein.
Name=Gulpi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8K2A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 18
Q8K2A1
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Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Kroyvinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; Green E.D., Dickson M.C., Grimwood J., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
The PANTOM Consortium,
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation of
60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
Mus musculus 8 days embryo whole body CDNA, RIKEN full-length enriched
library, clone:5736529006 product:CED-6 PROTEIN homolog.
                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Mammary tumor metastatized to lung. Tumor arose spontaneously;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Mammalia, Butheria, Rodentia, Sciurognathi; Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Functional amnotation of a full-length mouse cDNA collection."; Nature 409:685-690(2001).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 304;
                                                                                                                                                                                                                                                                                                                                                                                                 Strausberg R.;
Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        304 AA; 34470 MW; D99154EF53EFDC45 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                              7
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"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 43; DB 2; Pred. No. 26; 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   309 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last seq
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SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=99279253; PubMed=10349636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [2]
SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE=Whole body;
MEDLINE=21085660; PubMed=11217851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 57.1%;
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 YIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
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"Genome analysis of Photobacterium profundum reveals the complexity of
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                       Vezzi A., Campanaro S., D'Angelo M., Simonato F., Vitulo N., Lauro F.,
Céstaro A., Malacrida G., Simionati B., Cannata N., Bartlett D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vezzi A., Campanaro S., D'Angelo M., Simonato F., Vitulo N., Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
Vibrionaceae; Photobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hypothetical transposase.
Mame=TNRR, OrderediocusNames=PBPRB0657;
Pance-Turk, OrderediocusName (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.1%; Score 43; DB 2; Length 361; 56.2%; Pred. No. 31; tive 4; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                        58.1%; Score 43; DB 2; Length 361; 56.2%; Pred. No. 31;
                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                                                                                 high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; CR378679; CAG23229.1;
InterPro; IPR002559; Transposase_11.
Pfam; PF01609; Transposase_11; 1.
Complete proteome; HypotheTical protein.
SEQUENCE 361 AA; 42657 MW; EB1AA30A2A4AB10 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cestaro A.;
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; CR378679; CAG23229.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hypothetical protein.
SEQUENCE 361 AA; 42657 MW; EE1AA30A2A44AB10 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-WAY-2004 (TrEMBLrel. 27, Created)
10-WAY-2004 (TrEMBLrel. 27, Last sequence update)
10-WAY-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical bacterial IS-element.
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05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361 AA.
                                                                                                                                                                                                                                                                                                                                                                         4; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    :||||| |::| |:|
206 FIKANSKPKYVGFTQL 221
                                                                                                                                                                                                                                                                                                                                                                                                                     2 YIKANS--KFIGITEL 15
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Best Local Similarity 50.2.
Local 9; Conservative
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Adachi J., Aizawa K., Akraina S., Akrimura T., Arai A., Aono H.,
A Adachi J., Aizawa K., Akrimura S., Evkunishi Y., Furuno M.,
A Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiracka T., Hori F.,
Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
A Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
Sano H., Saeaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
A Sogabe Y., Suzuki H., Tagawi R., Shibata Y., Shinasha T.,
Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
Muramatsu M., Hayashizaki Y.;
Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
R EMBL; AK017798; BAB30939.1; -.
                                                                                     Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M., Komo H., Okazaki Y., Muramatsu M., Hayashizaki Y.; Woranalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes."; Genome Res. 10:1617-1630(2000).
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                                                                                                                                                                                                                                                          STRAIN-C57BL/61; TISSUE-Whole body;

MEDLINE-20530913; PubMed=11076861;
Shibata K., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Shibata Y., Itoh M., Alzawa K., Nagaoka S., Sasaki N., Carninci P., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K., Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Warahiki M., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.; RIKEN integrated sequence analysis (RISA) system-384-format
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Mypothetical bacterial IS-element.
Name-SF2983, OrderedLocusNames=PBPRB1358;
Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
Vibrionaceae; Photobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58.1%; Score 43; DB 2; Length 309; 57.1%; Pred. No. 27; 3; Indels iive 3; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequencing pipeline with 384 multicapillary sequencer.";
Genome Res. 10:1757-1771(2000).
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PROSITE; PS01179; PID; 1.
SEQUENCE 309 AA; 35272 MW; 535DD8E733C0F406 CRC64;
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InterPro; IPR002086; Aldehyde dehydr.
InterPro; IPR011036; PH related.
InterPro; IPR006020; PTB_PID.
                                         STRAIN-C57BL/6J; TISSUE=Whole body; MEDLINE-20499374; PubMed=11042159;
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SMART; SM00462; PTB; 1
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Name=SF2983; OrderedLocusNames=PBPRB1708;
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                                                                      SEQUENCE FROM N.A.
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                                               NCBI_TaxID=74109;
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                                               Lauro
D.,
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Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett D.,
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                                              Vezzi A., Campanaro S., D'Angelo M., Simonato F., Vitulo N.,
Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett
                                                                                                                                                                                                                                                                                                                                                                                            Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales; Vibrionaceae; Photobacterium.
                                                                                                                                                                                     58.1%; Score 43; DB 2; Length 394; 56.2%; Pred. No. 34; 1; Indels iive 4; Mismatches 1; Indels
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                                                                                         high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL, CA378677; CAG22530.1;
InterPro; IPR002559; Transposase_11.
Fiam; PF01609; Transposase_11; 1.
Complete proteome; HypotheTical protein.
SEQUENCE 394 AA; 47092 MW; SC04F2C6AEA21CE8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cestaro A.;
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; CR378677; CAG22530.1; -.
Hypothetical protein.
SEOUENCE 394 AA; 47092 MW; 5C04F2C6AEA21CE8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              high pressure adaptations.";
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases
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10-MAY-2004 (TrEMBLrel. 27, Last sequence update)
10-MAY-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical transposase.
TNPR OR PBPRB0657.
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Hypothetical transposase of Tn10.
                                                                                                                                                                                                                                                                                                                    394 AA
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         NCBI_TaxID=74109
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                                                                   Valle G.;
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                                SEQUENCE
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Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett
Valle G.;
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Cestaro A., Malacrida G., Simionati B., Cannata N., Bartlett
Valle G.;
Photobacterium profundum (Photobacterium sp. (strain SS9)).
Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
Vibrionaceae; Photobacterium.
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Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                        high pressure adaptations."; submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases. EMBL; CR378680; CRG23568.1; InterPro; IPR002453; Beta_tubulin. InterPro; IPR002559; Transposase_11.
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PROSITE; PS00228; TUBULIN B AUTOREC; UNKNOWN 1.
Complete proteome; Hypothetical protein.
SEQUENCE 395 AA; 46807 WW; F38002F4B3C3F4SC CRC64;
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Complete proteome; Hypothetical protein.
SEQUENCE 395 AA; 46793 MW; D710D7205853FCC1 CRC64;
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05-JUL_2004 (TrEMBLrel. 27, Last sequence update)
05-JUL_2004 (TrEMBLrel. 27, Last annotation update)
Hypotherical transposase of Thlo.
Name=SF2983; OrderedLocusNames=PBPRB1697;
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N 0 0 0 1 0 1 0 1 0 1 0 0 0 0 0 0 0 0 0	285 285 285 287 287 287 350 350 350 351 350 351 350 351 350 350 351 350 351 350 351 350 351 350 351 350 351 350 351 350 351 350 351 350 351 350 351 350 350 350 350 350 350 350 350 350 350	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 4	Waccine 89EP-00 89IT-00 89IT-00
	444444444	* * * * * * * * * * * * * * * * * * * *	74 744 744 74 74 06310 DEC-19	larial. tic. 31-A. 1990. 1989; 1989; 1989;

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corresponding amino acid residue in the parent peptides. For example, retropoptides or retroinverse peptides, provided that the immunoretroids are capable of forming complexes with the antimumunoretroid antibodies and with antibodies directed against the parent proteins and/or the parent peptide enantioners or parent proteins and/or the parent peptide enantioners or parent proteins and/or the parent peptide enantioners or parent proteins and/or the parent peptide enantioners or parent protein enantioners. The immunoretroids are used to prepare medicaments for preventing or treating pathologies associated with the presence of an exogenous or endogenous protein capable of being implicated directly or indirectly in the appearance and/or development of the pathologies. Immunoretroids can also be used to prepare vaccines for preventing pathologies associated with the presence of an exogenous or preventing pathologies associated with the presence of an exogenous or endogenous protein recognised by antibodies directed against an immunoretroids. Comparisons containing immunoretroids associated with a immunoretroids capable of inducing production of antibodies against an experience of an exogenous or carrier molecule capable of inducing production of antibodies against an
                                                                                                                                                                                                                                                                                                         exogenous or endogenous protein responsible for a pathology, or of inducing a cytotoxic callular immune response are useful as vaccines. Pathologies that can be diagnosed or treated are especially viral or bacterial infections, autoimmune diseases and neurodegenerative diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic DNA coding for the wild-type universal Th epitope from tetanus toxoid, designated TT830, was fused to the 3'-end of DNA encoding heavy chain sequences from the humanised anti-Fc gamma RI monoclonal antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Recombinant, multi-specific anti-Fc receptor antibody molecules - also comprise an anti-target portion, used for the treatment of cancer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Humanised antibody; anti-Fc receptor; H22; bifunctional; bispecific;
fusion protein; chimera; tetanus toxoid; helper T cell epitope;
                                                                                                                                                                                                                                                                                                                                                                                 This sequence represents a cytotoxic T epitope related retro-partly inverso peptide relating to the retropeptides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Somasundaram
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 comprise an anti-target portion, used for the autoimmune disease and pathogenic infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tetanus toxoid universal Th epitope TT830.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Graziano R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 7; Fig 24; 115pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW11505 standard; protein; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96WO-US009988
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1997-052242/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MEDA-) MEDAREX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-PSDB; AAT58127.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9640789-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-JUN-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-DEC-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW11505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW11505
ID AAW
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                                                                                                                                                                 Epitopic peptides may be used with synthetic hapten derived from a pathogen to generate an immune response to the pathogen. Peptides are recognised by numerous Thelper cell clones within the context of a wide range of alleles of the human MHC. The peptides may be used in an antimalarial vaccine inducing Ab. response to P.falciparium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Therapeutic and diagnostic uses of retro peptide analogues - corresp. to parent peptide chains with CONH linkages replaced by NHCO linkages, also antibodies against the peptide(\epsilon).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunoretroid antibodies, where the immunoretroids are peptide analogues in which one or more (preferably all) of the COMH linkages in the chain of the corresponding parent peptides are replaced by NHCO linkages and the chirality of each amino acid residue, whether involved in NHCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunoretroid; anti-immunoretroid; CONH linkage; NHCO linkage; retropeptide; retroinverse peptide; vaccine; viral; bacterial infection; autoimmune disease; neurodegenerative disease; retro-partly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention relates to the novel uses of 'immunoretroids' or anti-
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                       - used as
for use as
                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cytotoxic T epitope retro-partly inverso peptide TT830-844.
                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                                                     Synthetic peptide(s) corresp. to tetanus toxin epitope(s) universal carriers for prepn. of immunogenic conjugate(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Muller S, Briand J, Regenmortel MHV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Modified by OH"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADB87354 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 22; 58pp; French
                                                                                                                               Claim 1; Page 17; 20pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     94FR-00002950.
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                                                                                                                                                                                                                                                                                                                                                                                                                           OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                       QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
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                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1995-322414/42.
               WPI; 1990-225582/30.
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
Modified-Bite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FR2717081-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADB87354;
                                                                                               vaccines.
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Gaps

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0; Indels

derived from or indicative of pregnancy or of a disease, such as an infectious, autoimmune or cancerous disease. (Updated on 25-MAR-2003 to correct PF field.)

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Gaps

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0; Indels

0; Mismatches

15

QYIKANSKFIGITEL

1 OYIKANSKFIGITEL 15

8 a

15; Conservative

Best Local Similarity

Query Match Matches

Sequence 15 AA;

889938

100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;

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H22. The resulting fusion protein was shown to be significantly more efficient in antigen presentation and T cell stimulation that the TT830 epitope alone. A similar fusion construct was prepared coding for a mutant, antagonistic form of the epitope (designated TT833S) fused to the anti-Fc gamma RI. The Fab20-TT833S is at least 100 times more effective than TT833S in inhibiting T cell activation
                                                                                                                                                                                                                                                                                                                              T-cell stimulatory peptide; immunogen; non-dendritic; carrier; tumour; scaffold; inhibition; metastasis; wound healing; solid phase.
                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ಥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Non-dendritic peptide carrier linked to a solid phase - useful as diagnostic agent and as a scaffold for production of chemical derivatives.
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                                                                                                     100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                         Universal T-cell epitope peptide SEQ ID NO:8.
                                                                                                                           0; Mismatches
                                                                                                                                                                                                                              AAW35506 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                  97WO-DK000146.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       96DK-00000398.
                                                                                                                                                  1 OYIKANSKFIGITEL 15
                                                                                                                                                                      OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jakobsen PH;
                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (PEPR-) PEPRESEARCH AS.
                                                                                                                                                                                                                                                                          (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1997-512645/47.
                                                                                                                Local Similarity
nes 15, Conserv
                                                                                Seguence 15 AA;
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                                                                                                                                                                                                                                                                                                                                                                                      WO9738011-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                 03-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-APR-1996;
                                                                                                                                                                                                                                                                        25-MAR-2003
22-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                          16-OCT-1997.
                                                                                                                                                                                                                                                   AAW35506;
                                                                                                     Query Match
                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                   AAW35506
                                                                                                                                                                                                         RESULT
  8888888888
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Liver stage, Plasmodium; Navy Yoelii Liver Stage 3 antibody; NYLS3; hepatic and erythrocytic stage protein; PyHEP17; vaccine; malaria parasite; teanus toxin; P2; helper T-cell epitope.

Synthetic. Clostridium tetani.

US5814617-A 29-SEP-1998

Universal helper T-cell epitope P2 derived from tetanus toxin.

(first entry)

26-NOV-1998

AAW71321;

AAW71321 standard; peptide; 15 AA.

RESULT

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW71321-22 represent universal helper T-cell epitopes derived from tetanus toxin. They are used to enhance host immune response to vaccines. The specification describes a Plasmodium yoelli liver stage 17 kDa hepatic and erythrocytic stage protein designated PyHEP17. This protein elicits a response from an Igl monoclonal antibody designated Navy Yoelli Liver Stage 3 (NYLS3). This antibody does not recognise sporozoites, but does recognise P. yoelli liver stage parasites. NYLS3 eliminates upto 90% of liver stage parasites. The specification describes a vaccine for reducing the severity or incidence of infection by a malaria parasite of the genus Plasmodium. The DNA vaccine comprises exon 1 and part of exon 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vaccine for protecting mammal against infection by malaria caused by Plasmodium species - comprises a first nucleic acid encoding a first polypeptide capable of eliciting an immune reaction against an antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 74; DB 2; I
Best Local Similarity 100.0%; Pred. No. 9.4e-07;
Matches 15; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure, Col 12, 24pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  expressed during the liver.
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                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-541794/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the PyHEP17 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 15 AA;
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through a linker to a solid phase, forming a complex of (A)-solid phase.

Through a linker to a solid phase, forming a complex of (A)-solid phase.

Through a linker to a solid phase, forming a complex of (A)-solid phase.

Through a linker to a solid phase capable of forming a secondary structure in a benign buffer after liberation from the solid phase, and further the (A)-solid phase complex comprises an immunogenic substance and/or an immune mediator coupled on (A). The present sequence represents a peptide used in an example from the present invention. An (A)-solid phase complex can be used as a scaffold for the production of chemical characterised by covalently attaching molecules at attachment points. Alternatively (A) is used as a scaffold-peptide for the incorporation into an Immunostimulating Complex (Iscom) resulting an (A)-Iscom complex which is used for the chemical coupling of antigenic substances in an aqueous solution by conjugation. (A) derivatised with one or more peptides having fibronectin-, laminin- or vitronectin-like binding activities can be used for the promotion of cell-attachment to plastic surfaces, in particular to inhibit tumour growth and metastasis, and for promotion of wound healing. Also a derivatised (A) can be used for the selection of specifically-binding aptamers or as a diagnostic corpusation. Such diagnostic-(A) molecules could be used to detect molecules

Example 20; Page 124; 262pp; English.

Hedstrom RC;

Hoffman SL,

Charoenvit Y,

Doolan DL,

(USNA) US SEC OF NAVY.

94US-00319704. 94US-00319704

07-OCT-1994; 07-OCT-1994;

AAW67033;

RESULT 6

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The invention relates to the manufacture of a synthetic chimeric peptide comprising a non-typable Haemophilus influenzae fimbrin peptide fused via a linker peptide to a T-cell epitope peptide. The chimeric peptide is used in immunogenic compositions which induce an immune response against non-typable Haemophilus influenzae. This sequence represents an example of a T-cell epitope peptide used to generate the chimeric peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Covalently reactive antigen analog, CRAA, catalytic antibody, electrophilic reaction centre, phosphonate, boronate, vaccine, transition state analog, TSA, isostere, gpl20, HIV-1, T-helper, tetanus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic chimeric fimbrin peptide - useful for vaccination against non-
                                                                                                                   Chimeric; non-typable Haemophilus influenzae; fimbrin; T-cell epitope;
                                                                             T-cell epitope peptide #4 for chimeric fimbrin/T-cell epitope peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 74; DB 2; I 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                          immunogenic composition; immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-Helper epitope from tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY04051 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure, Col 4; 16pp; English.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                typable Haemophilus influenzae.
                                                                                                                                                                                                                                                                                                      95US-00460502.
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                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                           Bakaletz LO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                     (OHIS ) UNIV OHIO STATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-044514/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     toxoid; B-T-epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                             Kaumaya PTP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9948925-A1
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                                     02-MAR-1999
                                                                                                                                                                                                                                                                                                      02-JUN-1995;
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                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY04051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a new carbohydrate peptide conjugate, which comprises a carrier with a dendrimeric poly-lysine enabling multiple epitopes to be covalently attached to it. Also claimed are: (1) an antibody purified from biological fluid or cells of organisms administered with the carbohydrate peptide conjugate, and (2) a diagnosis kit comprising antigen-specific antibodies elicited by immunisation with the carbohydrate peptide conjugate, antibody and diagnosis kit are used to provide pharmaceutical compositions and vaccines against tumours. These can be used to support an immune response against viral infections caused by hepatitis virus, HIV or cycomegalo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus. They can be used to enhance immune responses, especially B- and T-cell responses, of humans and animals against bacterial infections. The carbohydrate peptide conjugate stimulates the antibody and T-cell response without stimulating undesired immune responses. The composition is capable of increasing the survival of tumour bearing humans and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      animals. The present sequence corresponds to residues \tilde{8}30-844 of tetanus toxin. The synthetic peptide corresponding to this sequence may be used as an epitope in a carbohydrate peptide conjugate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carbohydrate peptide conjugate used as vaccine - comprises carrier with dendrimeric poly-lysine enabling multiple epitopes to be covalently
                                                                                                                                                                                                                                                                    carbohydrate peptide conjugate;
tumour.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lo-Man R;
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                                                                                                                                                                                                                                           Tetanus toxin fragment (residues 830-844)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Leclerc C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 13; 55pp; English.
                                                                                                                                                                                                                                                                                 Tetanus toxin; vaccine; antibody; dendrimeric poly-lysine; epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW67578 standard; peptide; 15 AA.
                                                                                                                 AAW67033 standard; peptide; 15 AA
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                1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cantacuzene D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (INSP ) INST PASTEUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1998-557071/47.
                                                                                                                                                                                                                                                                                                                                           Clostridium tetani.
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(UYNE-) UNIV NEBRASKA

AAW67578;

AAW67578

RESULT 7

Query Match

Matches

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Length 15; 0; Indels

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Example 7; Col 27; 57pp; English
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                                                                                                                                                                      The patent discloses new covalently reactive antigen analogs (CRAA) of formula X1-Y-B-X2, in which X1 and X2 represent peptide sequences of an epitope of a disease-associated protein, Y is a positively charged amino acid residue, preferably Lys or Arg, and B is an electrophilic reaction control of the epitope, the CRAA may be used to stimulate production of identity of the epitope, the CRAA may be used to stimulate production of catalytic antibodies specific for predetermined antigens associated with particular medical disorders. They may also be used to permanently inactivate endogenously produced catalytic antibodies produced in certain autority associated with cautolimune diseases as well as in certain lymphoproliferative disorders. Amongst the specifically exemplified CRAAs is one based on residues 421-436 of a B-cell epitope of gpl20 (see AAY04046) which may be used to counter HYV-1 infections. When used as an immunogen, preferably this CRAA is conjugated at its N-terminal to a T-helper epitope from tetanus toxodd. The present sequence represents the T-helper epitope and corresponds to residues 830-844 of the toxoid
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                                                                              New covalently reactive antigen analogs used for treating e.g. autoimmune diseases, lymphoproliferative disorders, cancers, microbial infections,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Multispecific single chain antibody; antibody H22; tumour cell; therapy; antibody-dependent cellular cytotoxicity; ADCC; HER 2/neu; infection; epidermal growth factor receptor; breast cancer; ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Specific killing of tumour cells - using a multi-specific molecule comprising an anti-Fc receptor antibody and a portion which binds to a target cell.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 2; Length 15; 100.0%; Pred. No. 9.4e-07;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                             ischemic and reperfusion injury or septic shock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                           Disclosure; Page 86; 158pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW73220 standard; protein; 15 AA.
                Smith L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96US-00661052.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 QYIKANSKFIGITEL 15
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ses 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tetanus toxoid epitope.
                Gololobov G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-023374/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MEDA-) MEDAREX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Somasundaram C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-JUN-1996;
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              Paul S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
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This sequence represents a tetanus toxoid epitope and is recognised by the multispecific single chain antibody designated H22. The antibody can be used in the method of the invention for inducing antibody-dependent cellular cytotoxicity (ADCC) against a tumour cell which is characterised by overexpression of HER 2/neu or epidermal growth factor receptor (BGER), comprises contacting the tumour cell with a multispecific protein molecule (preferably a single chain antibody comprising: (a) an anti-FC receptor antibody or an antigen binding fragment; (b) a portion which binds to HER 2/neu; and (c) a portion which be used for treating cancers especially breast cancer or ovarian cancer. The multispecific antibody can also be administered prophylactically to vaccinate a subject against infection by a target cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGRB). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The claims detail a method for inducing immune responses against weakly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Foreign epitope, P2; prostate specific membrane antigen, PSM, Her2; Heregulin 2; Fibroblast growth factor Bb; FGFBb; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
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                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                       Length 15;
                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 2; I 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                              Mismatches
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98US-0105011P
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Best Local Similarity 10v.v
Local Similarity 10v.v
Local 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Foreign epitope P2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Birk P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani
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                                                                                                                                                                                                                                                                                Sequence 15 AA;
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20-OCT-1998;
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falciparum in biological samples

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Sequence 15 AA;

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The present sequence is the tetanus toxoid T-cell epitope P589, derived from Clostridium tetani. It is used in the construction of recombinant protein CDC/NIIMALVAC-1, which is a multivalent, multistage malarial vaccine. The recombinant protein comprises, melittin signal peptide, (His) 6 tag, T-cell epitope from tetanus toxoid and 21 antiganic epitopes from circumsporozoite protein (CSP), sporozoite surface protein-2 (SSP-2), liver stage antigen-1 (LSA-1), merozoite surface protein-1 (MSP-1), MSP-2, apical membrane antigen-1 (MAM-1), erythrocyte binding antigen-175 (BBA-175), rhoptry associated protein-1 (MAP-1) and gamete specific antigen, Pfg27. These epitopes were obtained at different stages of the life cycle of P. falciparum. CDC/NIIMALVAC-1 vaccine has antiparasitic activity and can used for treatment and prevention of malarial infections. Anti-CDC/NIIMALVAC-1 antibodies can be used for detecting P.
                                                                                                                                                                                                                                                ö
; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and human/murine FSBsb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope (e.g. PZ and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel recombinant protein as vaccine for treating malarial infection comprises antigenic peptides obtained from different stages of plasmodium falciparum life cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-cell epitope; tetanus toxoid; antigenic epitope; treatment; circumsporozoite protein; CSP; sporozoite surface protein-2; SSP-2; liver stage antigen-1; LSA-1; merozoite surface protein-1; MSP-1; apical membrane antigen-1; AMA-1; erythrocyte binding antigen-175; EBA-175; rhoptry associated protein-1; RAP-1; gamete specific antigen; Pfg27; antiparasitic; prevention; anti-CDC/NIIMALVAC-1 antibody.
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Recombinant protein; CDC/NIIMALVAC-1; multivalent; malaria; vaccine;
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                                                                                                                                                                                                        Length 15;
                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani tetanus toxoid T-cell epitope, P589.
                                                                                                                                                                                                        100.0%; Score 74; DB 3; I
100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                            Mismatches
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(USSH ) US DEPT HEALTH & HUMAN SERVICES.
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                                                                                                                                                                                                                                                                                                                                                                                                                             AAY70300 standard; peptide; 15
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Best Local Similarity
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                                                                                                                                                                Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-AUG-1999;
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The present sequence represents the tetanus toxoid P2 epitope. It is used to create a fusion protein with murine osteoprotegerin ligand (OPGL). Osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL polypeptides are 81% homologous. OPGL is a potent osteoclast differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL activity in an animal. The method comprises using at least one OPGL animal response in the animal. The method and OPGL analogue to induce in the animal. The method and OPGL polypeptide are useful for treating, preventing and amaliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                                                                                                                                         tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption; tetanus toxoid P2 epitope.
                                    Gaps
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100.0%; Score 74; DB 3; Length 15; 100.0%; Pred. No. 9.4e-07;
                                   0; Indels
                                                                                                                                                                                                                                                                                                     Amino acid sequence of the tetanus toxoid P2 epitope.
                                   Mismatches
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                                                                                                                                                                                               AAY84427 standard; peptide; 15 AA.
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                                                                      1 QYIKANSKFIGITEL
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                                      Conservative
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Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
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                                    15;
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                                    Matches
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100.0%; Score 74; DB 3; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels

1 OYIKANSKFIGITEL 15

15; Conservative

Matches

Query Match Best Local Similarity

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OYIKANSKFIGITEL
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AAY82637 standard; peptide; 15 AA AAY82637; RESULT 13

(first entry) 07-AUG-2000

Tetanus toxoid T cell epitope peptide SEQ ID NO:13.

T cell epitope, B cell epitope, allergy, allergen, antigenic, antiallergic, antiasthmatic, antiinflammatory, dermatological, immunosuppressive, vaccine, rhinitis, sinustits, bronchial asthma; atopic dermatitis, acute urticaria; chronic urticaria; gastro-intestinal syndrome, food allergen, oro-pharyngeal syndrome, anaphylactic reaction, drug hypersensitivity, allergic reaction.

Clostridium tetani.

Synthetic.

WO200006694-A2.

10-FEB-2000

99WO-BE000092 20-JUL-1999; 98EP-00870167 30-JUL-1998;

(UNIO) UCB

Saint-Remy J, Jacquemin M;

WPI; 2000-422470/36.

compound for prevention and treatment of allergies comprises at least allergen antigenic determinant recognized by a B cell and at least antigenic determinant which does not trigger T cell activation. New

Example 6; Page 30; 50pp; English.

The present invention describes a compound (I) for the prevention and/or treatment of allergy. The compound comprises at least one allergen antigent determinant (i) recognised by a B cell or an antibody secreted by a B cell of a non-atopic individual and at least one antigenic determinant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antinflammatory.

C dermatological and immunosuppressive activities, and can be used in a vaccine. (I) may be used in a pharmaceutical or cosmetic medicanent to repectally hypersensitivities. These include rhinitis, sinusitis, bronchial asthma, atopic dermatitis, some forms of acute and chronic urticaria, gastro-intestinal syndromes associated with the ingestion of too allergams, oro-pharypaeal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or a mixture of these. The use of (I) in the treatment of allergic conditions avoids the need for drug therapies alleviate symptoms, but do not influence their causes, however (I) actually combate the cause of an allergic reaction. The presents sequence represents a peptide, which is used in an example from the contraction. the present invention

Sequence 15 AA;

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100.0%; Score 74; DB 3; Length 15; ilarity 100.0%; Pred. No. 9.4e-07; Conservative 0; Mismatches 0; Indels
  Query Match
Best Local Similarity
Matches 15; Conserv
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1 QYIKANSKFIGITEL 15

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AAY44763

AAY44763 standard; peptide; 15 AA.

AAY44763;

04-MAY-2000 (first entry)

Tetanus toxoid protein derived T-cell activating epitope P2.

Surface layer protein; S-layer secretion signal; antibiotic; vaccine; recombinant fusion protein cleavage; enzyme; protein polymer; foodstuff; antibacterial enzyme; surface glycoprotein; T-cell activating epitope; P2; tetanus toxoid; IPNV; Infectious pancreatic necrosis virus.

Clostridium tetani.

WO200004170-A1

27-JAN-2000

99WO-CA000637. 14-JUL-1999;

14-JUL-1998;

(UYBR-) UNIV BRITISH COLUMBIA.

Smit J;

WPI; 2000-182434/16.

Cleavage of Caulobacter produced recombinant fusion proteins useful for producing vaccine peptides.

Example 2; Page 16; 33pp; English

The patent discloses a method for cleaving a recombinant fusion protein which is produced by Caulobacter and consists of Caulobacter surface layer (S-layer) protein (containing the C-terminal secretion signal) and a target protein heterologous to Caulobacter. The cleavage of target protein heterologous to Caulobacter. The cleavage of target protein heterologous to carried out under mild acid conditions so that cleavage occurs at aspartate-proline dipeptide site without solubilising the protein. The cleavage is accomplished while the fusion protein is in an insoluble aspartate-proline dipeptide site purification of the protein. The method is useful for producing pure purification of the protein. The method is useful for producing pure printing the protein protein minal therapeutic antibiotic and vaccine peptides, enzymes, protein polymers, and antibiotic and vaccine peptides, enzymes, protein polymers, and antibiotic and vaccine peptides, enzymes, protein protein. This sequence was fused to a DNA encoding a fragment of Infectious pancreatic necrosis virus surface glycoprotein which is a vaccine candidate. This chimeric protein was in turn fused to DNA encoding C crescentus S-layer secretion signal acid 690 onwards and contains native Asp-Pro site) for construction of a recombinant fusion construct which is expressed in Caulobacter and then C-terminal portion of the S-layer protein from amino recombinant fusion construct which is expressed : cleaved to recover the vaccine candidate protein (corresponds to the

Sequence 15 AA;

Gaps . 0 100.0%; Score 74; DB 3; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels Local Similarity 100. Les 15; Conservative Query Match Matches

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1 OYIKANSKFIGITEL 15 QYIKANSKFIGITEL 15

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RESULT 15

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AAB45511

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The invention relates to a method for in vivo down-regulation of amyloid protein such as beta amyloid (Abeta) in an animal, including human. The method comprising presenting to the animal's immune system an immunogenically effective amount of at least one amyloidogenic protein or its subsequence and/or at least one analogue of the amyloidogenic protein or its subsequence, and its analogue is useful for the preparation of an immunogenic composition comprising an adjuvant for down-regulating amyloid deposits. They are also useful in the treatment, prophylaxis or amelioration of Alzheimer's disease or other diseases characterised by amyloid deposits. They are also useful in the treatment of systemic amyloidosis, maturity onset disease or other diseases tharacterised by amyloid deposits. They are also useful in the treatment of systemic amyloidosis, maturity onset disease. Parkinson's disease, Huntington's disease, fronto-temporal commentia, amyotorophic lateral sclerosis (ALS), Pick's disease and prion-related transmissable apongiform encephalopathies. They are also useful for inducing production of antibodies against an amyloidogenic polypeptide. The present sequence is Clostridium tetani P2 epitope
                                                                                                                                                                                                                                                                                                                                                          In vivo down-regulation of amyloid protein for the treatment of Alzheimer's, comprises presenting an amyloidogenic polypeptide or its subsequence and/or at least one analogue of the amyloidogenic polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomypathy; transmissible spongiform encephalopathy; creutzfeld-Jakob disease; Kuru, haemodialysis-asssociated beta-2-microglobulin deposition; carrier protein; universal T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 3; Page 117; 120pp; English.
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                                                                              19-FEB-2001; 2001WO-DK000113.
                                                                                                                          21-FEB-2000; 2000DK-0000265.
01-MAR-2000; 2000US-0186295P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                        the immune system.
                                                                                                                                                                                                                                               Jensen MR,
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                                  30-AUG-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amyloid protein; neuroprotective; nootropic; immunostimulant; vaccine;
                                                                                                                                                                                         Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection; cancer; eosinophilia; vaccine, allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alzheimer's disease; anticonvulsant; gene therapy; Pick's disease; antidiabeli; systemic amyloidosis; maturity onset diabetes; ALS; amyotrophic lateral sclerosis; Parkinson's disease; encephalopathy; Huntington's disease; fronto-temporal dementia; P2 epitope.
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    AAB45511 standard; protein; 15 AA
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                                                                                                                                           Fetanus P2 epitope SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                         19-APR-2000; 2000WO-DK000205
                                                                                                                                                                                                                                                                                                                                                                                                                                                     99DK-00000552
99US-0132811P
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Query Match Matches

RESULT 16 AAE11763

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Gaps ö human immunodeficiency virus

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a pattent. The pharmaceutical composition comprises on agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity or control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid beta peptide fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposits; type 2 disease characterised by amyloidosis associated with systemic inflammatory diseases (e.g., rheumatorid arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid cardiomyopathy characterised by ATTR (ibrils derived from transthyretin (TTR); transmissible spongiform encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result of the characterised by result
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                                                                                                                                                                                                                                                                                                                         Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result of long term haemodialysis treatment. The present sequence represents a universal T-cell epitope which may be used as a carrier for an epitope derived from an amyloid plaque component in a composition of
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 43; 140pp; English
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                                                   01-JUN-2000; 2000WO-US015239
                                                                                                         99US-0137010P
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                            (NEUR-) NEURALAB LID
                                                                                                                                                                                                                                                                      WPI; 2001-070921/08.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the invention
                                                                                                         01-JUN-1999;
07-DEC-2000
                                                                                                                                                                                                                  Schenk DB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAM99515;
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The present invention describes a pharmaceutical compound (I) that
contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in
the form of an addition salt with a strong, physiologically acceptable
acid (II). Also described are: (a) a pharmaceutical composition
acid (II). Also described are: (a) a pharmaceutical composition
containing at least one (I); (b) a vaccine containing at least one (I)
containing at least one (I); (b) a vaccine containing at least one (I)
containing at least one (I); (b) a vaccine containing at least one (I)
corporated for in vitro diagnosis of diseases associated with the presence of
corporation (I). (I) has immunomedulator, endocrine, antiallergic,
corporated activities. (I) has immunomedulator, endocrine, antiallergic,
corporated activities. (I) are useful, in human or veterinary medicine,
corporated activities. (I) are useful, in human or veterinary medicine,
corporated activities. (I) are useful, in human or veterinary medicine,
corporated activities. (I) are useful, in human or veterinary medicine,
corporated corposations (for treating immune disorders, e.g.
corporated corposation, hormonal disorders and central nervous system
corporated with infersor of (I) is a MHC ligand (Ia), in vaccines for
corporated with interactions between MHC and (I), e.g. melanoma and human
corporated with interactions between MHC and (I), e.g. melanoma and human
corporated in pharmaceutical compounds from the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stabilized pharmaceutical containing N-terminal glutamic acid or glutamine, useful e.g. in anti-melanoma vaccines, is an addition salt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goetsch L;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Klinguer-Hamour C, Corvaia N, Beck A,
                                                                                                                                                                                                                                                                                                                                                                                                                (FABR ) FABRE MEDICAMENT SA PIERRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB46172 standard; peptide; 15 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 9; Page 136; 149pp; French.
                                                                                                                                                                                                                                                   22-MAR-2001; 2001WO-FR000872
                                                                                                                                                                                                                                                                                                                                  23-MAR-2000; 2000FR-00003711.
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ses 15; Conservative
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Clostridium tetani
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                                                                                  WO200170772-A2.
                                                                                                                                                                     27-SEP-2001.
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Clostridium tetani

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The invention relates to a bispecific molecule (I) comprising specific binding sites for an Fcalpha receptor and an epidermal growth factor (EGF) receptor. It also provides bispecific molecule (II) comprising a human antibody, preferably a single chain antibody, specific for an Fcalpha receptor, linked to EGF, a bispecific molecule (III) comprising specific binding sites for an Fcalpha receptor and a HER2 receptor; (3) a multispecific molecule (IV) comprising specific binding sites for Fcalpha receptor, HER2 receptor and EGF receptor; (4) a multispecific molecule (V) comprising a human antibody specific for an Fcalpha receptor, and EGF. (I) can be used for antibody specific for a HER2 receptor, and EGF. (I) -(V) can be used for
                Compositions comprising polypeptides and polynucleotides for stimulating the immune system and for treating malignancies associated with overexpression of the HER-2 protein.
                                                                                                                                                  The present invention relates to compositions for stimulating the immune system and for treating malignancies associated with overexpression of the HER-2 protein. The compositions comprise immunogenic groups of the HER-2 proteins. The present sequence is one such peptide used in the compositions of the present invention. The compositions on be used for treating cancer, e.g. breast, ovarian, lung, prostate and colon cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fcalpha receptor; epidermal growth factor; EGF; HER2 receptor; tumour; immune thromboorytopenia purpura; systemic lupue erythematosus; vaccine; cytostatic; antivital; protozoacide; antifungal; immunosuppressive; antifufammatory; dermatological; hemostatic; tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              reprossing molecule comprising specific binding sites for an FC-alpha receptor and an epidermal growth factor, used to induce effector cell killing of tumor cells.
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07; rive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tetanus Toxoid universal Th epitope TT830.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 7; Fig 24; 183pp; English.
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                                                                                                          Claim 4; Page 38; 51pp; English.
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10-MAR-2000; 2000US-00523279
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                                                                                                                                                                                                                                                                                                                                                                                                     15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-123318/13.
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                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
                                                                                                                                                                                                                                                                                                               Sequence 15 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB61956;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                        This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                                                                                                                                                                                                                           Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                       Yednock T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Triozzi PL;
                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 28; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB68636 standard; peptide; 15 AA.
                                                                                                                                                                                                                       Bard F, Vasquez NJ,
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                                                                                     26-MAY-2000; 2000WO-US014810
                                                                                                                               99US-00322289
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
nes 15; Conservative
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                                                                                                                                                                           (NEUR-) NEURALAB LTD
                                                                                                                                                                                                                                                                 WPI; 2001-032104/04.
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WO200072880-A2
                                                                                                                               28-MAY-1999;
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                                                                                                                                                                                                                       Schenk DB,
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Matches
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δ 셤 Sequence 15 AA;

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inducing effector cell killing of tumour cells. The molecules can be used to treat or prevent viral, protozoal, or fungal infections, or autoimmune diseases such as immune thrombocytopenia purpura and systemic lupus erythematosus. The present sequence represents a wild-type tetanus toxoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxin, T-cell epitope, growth differentiation factor 8, GDF-8, myostatin, down-regulation, vaccine, muscle, meat, cachexia, cardiant.
                                                                                                                                                                                      Gaps
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                                                                                                                                               100.0%; Score 74; DB 4; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                    0; Indels
                                                                                                                                                                                    0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 95; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                     AAB20143 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus toxin T-cell epitope P2.
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                                                                                                                                                                Local Similarity 100.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium tetani.
                                                                                                             Sequence 15 AA;
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                                                                        epitope TT830
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                                                                                                                                               Query Match
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                                                                                                                                                                                    Matches
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                                                                                                                                                                                                                                                                                                                             HER 2/neu; epidermal growth factor receptor; EGFR; multispecific protein; FC receptor; FCR; tumor cell; breast; cancer; sarcoma; carcinoma; HIV; pathogenic; Toxoplasma gondii; candidiasis; systemic lupus; cytostatic; immune thrombocytopenia purpura; immunosuppressive; antiviral; antifungal; antiprotozoal; TT830; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inducing killing of tumor cells which expresses HER 2/neu or epidermal growth factor receptor (EGFR) by contacting the cell with multispecific proteins comprising an anti-Fc receptor, -Her 2/neu or -EGFR antibody, useful for treating cancer.
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Length 15;
                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Somasundaram C;
100.0%; Score 74; DB 4; I 100.0%; Pred. No. 9.4e-07;
                                    Mismatches
                                                                                                                                                                                                                                                                                              Wild-type TT830 (tetanus toxin) epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Graziano R,
                                                                                                                                                                                           AAB85451 standard; peptide; 15 AA.
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96US-00661052
                                                                    1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                            (first entry)
                                                                                            QYIKANSKFIGITEL
                                  15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-475189/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MEDA-) MEDAREX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium tetani.
              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAH23378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US6270765-B1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-JUN-1995;
                                                                                                                                                                                                                                                            25-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-AUG-2001.
                                                                                                                                                                                                                          AAB85451;
Query Match
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                                  Matches
                                                                                                                                                         RESULT 23
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Outer surface lipoprotein; OspA; antibacterial; immunosupressive; vaccine; poikilothermic fish; fin-fish; Rickettsial septicaemia; Rickettisial disease; tetanus toxin P2; tt P2; T cell epitope.

Clostridium tetani.

CA2339327-A1.

15-MAR-2002.

Tetanus toxin P2 (tt P2) T cell epitope.

(first entry)

12-AUG-2002

AAU97872;

1 QYIKANSKFIGITEL 15

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the important response to Desmodium vivax. (I) comprises antigenic determinants, fragments to conservative substitutions, darived from more than one stage in a life cycle of a Plasmodium vivax. (I) comprises antigenic than one stage in a life cycle of a Plasmodium vivax parasite. (I) is susful as a vaccine for stimulating an immune response, specifically a protective immune response that confers increased resistance to infection by Plasmodium parasites, such as P. vivax. (I) is especially useful in the treatment, prevention and reduction of malarial infection, as reages to diagnostic reagents for the detection of Plasmodium species in a biological sample, and for conferring immunity against multiple stages of the malarial parasite. The antibodies produced are useful for the detection or measurement of antigenic epitopes derived from one or more stages in a life cycle of a parasite, particularly P. vivax. The vaccine comprising the recombinant proteins, is cost-effective, health promoting intervention for controlling, preventing or treating the incidence of malaria. The present sequence represents the amino acid sequence of a PZ epitope, a component of the multivalent and multistage proteins vivaclp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        invention relates to recombinant multivalent proteins (I) that
                                                                                                                                                                                                                   Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVac1; ViVac2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / Match 100.0%; Score 74; DB 4; Length 15; Local Similarity 100.0%; Pred. No. 9.4e-07; Nes 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (USSH ) US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Page 25; 59pp; English.
                                           AAB85701 standard; peptide; 15 AA
                                                                                                                                                                         Amino acid seguence of P2 epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                        29-JAN-2001; 2001WO-US002937.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-JAN-2000; 2000US-0179213P.
                                                                                                                              29-OCT-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lal AA, Xiao L, Zhou Z;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-514557/56.
                                                                                                                                                                                                                                                                                     Plasmodium vivax.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                 WO200155181-A2.
                                                                                                                                                                                                                                                                                                                                                                             02-AUG-2001
                                                                                       AAB85701;
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RESULT 24
                         AAB85701
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Inducing immunity in fin fish to Rickettsial septicaemia, comprises administration of an outer surface lipoprotein (OspA) of a bacterial

Disclosure; Fig 8; 55pp; English.

strain, as a vaccine.

Burian J, Kuzyk MA;

Kay WW,

Thornton JC,

WPI; 2002-455221/49.

N-PSDB; ABK52412

15-SEP-2000; 2000US-00677374. 19-MAR-2001; 2001CA-02339327.

THORNTON J

(THOR/)

(KAYW/) KAY W W. (BURI/) BURIAN J. (KUZY/) KUZYK M A.

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                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention describes a method of protecting a poikilothermic fish against infection by the bacterial pathogen Fisciricketeisia Salmonis comprising administering either intraperitoneally, by immersion or orally, an immunogenic amount of principal antigen, the OspA (outer peptides derived or synthesized with or without an adjuvant. The new method is used to provide an outer surface lipoprotein (OspA) of bacterial strain Piscirickettsia salmonis as a vaccine to induce immunity in fin-fish against Rickettsial septicaemia and other related Rickettsial diseases caused by either a virus, bacteria or parasite. This is the amino acid sequence of a Clostridium tetanis toxin P2 (tt P2) T cell epitope that can be fused to the Escherichia coli codon optimised OspA creating a promiscuous T cell epitope for use in creating the vaccine described in the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 5; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity 100.
15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T helper cell epitope #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 15 AA;
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Gaps

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AAU97872 standard; peptide; 15 AA.

RESULT 25 AAU97872 ID AAU978

1 QYIKANSKFIGITEL 15 QYIKANSKFIGITEL 15

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Matches

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                                                                                                                                                                                                                                                                                                                                                                                                                                Novel immunogen useful for immunizing an animal, has an activated polyhydroxypolymer backbone to which is attached an antigenic determinant including a B cell epitope and another determinant including a T-helper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Covalently reactive transition state antigen analogue; CRTSA; epitope; antigen; electrophilic covalently reactive centre; catalytic antibody; antibody; autoimmune disease; autoimmune thyroiditis; asthma; systemic lupus erythematosus; rhemmatoid arthritis; Reiter's syndrome; mixed connective disease; Sjogren's syndrome; vasculitis; bird shot retinopathy; lymphoproliferative disorder; myeloma; leukaemia; lymphoma; macroglobulinaemia; vaccine; immunisation; infection; dermatological; septic shock; systemic inflammatory disease; acute respiratory distress syndrome; neoplastic disease; HIV, AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
Immunogen; B-cell epitope; cytotoxic T lymphocyte; CTL; TH epitope;
T helper cell epitope; virtual lymph node device.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 15;
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100.0%; Pred. No. 9.4e-07;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tetanus toxin immunogenic T epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 51; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABG72721 standard; peptide; 15 AA.
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                                                                                                                                                                                                              19-FEB-2001; 2001WO-DK000113.
20-FEB-2001; 2001US-00785215.
20-AUG-2001; 2001DK-00001231.
22-OCT-2001; 2001US-0337543P.
                                                                                                                                                                           19-FEB-2002; 2002WO-DK000112
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                                                                                                                                                                                                                                                                                                                                                         Koefoed P;
                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-706932/76.
                                                                                                                                                                                                                                                                                                                  (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 15; Conserv
                                                         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 15 AA;
                                                                                                WO200266056-A2.
                                                                                                                                    29-AUG-2002
                                                                                                                                                                                                                                                                                                                                                       Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABG72721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                epitope.
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The invention discloses a covalently reactive transition state antigen analogue (CRTSA), comprising a peptide sequence of an epitope of a target protein antigan (R.1), an electrophilic covalently reactive centre bearing a partial or full negative charge (E) and an electron withdrawing correlation appried sequence. The CRTSA is useful for treating a comprise a flanking speptide sequence. The CRTSA is useful for treating a catalytic antibody, which involves administering the action of a catalytic antibody, which involves administering the CRTSA, which comprises an epitope recognised and irreversibly inhibiting the action of a catalytic antibody. Preferably CRTSA is useful for treating an autoimmune disease, comprises an epitope recognised and irreversibly inhibiting the catalytic autibody. Preferably CRTSA is useful for treating an autoimmune disease, connective disease, Reiter's syndrome, vasculitis or bird sohr retinopathy, a syndrome, vasculitis or bird sohr retinopathy, a syndrome, syndrome, vasculitis or bird sohr retinopathy, a syndrome, syndrome, vasculitis or bird sohr retinopathy, a spranforme, syndrome, or catalytic antibodies (vaccine), for actively, or passively, immunising a patient against e.g. a microbial infection and for selecting catalytic antibodies on the surface of phage and B cells. This technology has applications in fields of veterinary medicine, industrial and clinical research and dermatological. The catalytic antibodies acute respiratory distress syndrome, or preventing medical disorders such as septic shock, systemic inflammatory disease, acute respiratory distress syndrome, incomplete the provides superior protection against the target antibodies or catalytic action against the target antigen which results in its permanent inactivation. The sequence presented is the tetamns toxin T epitope which can be placed on the N-terminal side of the B epitope (HIVV) the provides to a large carrier protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
human immunodeficiency virus; acquired immunodeficiency syndrome; gp120;
                                                                                                                                                                                                                                                                                                                                                                                                                            Novel covalently reactive transition state antigen analog useful for stimulating production of catalytic antibodies, and actively immunizing patient against particular pathogen to generate protective immunity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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0
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                       immunogenic; immunosuppressive; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure, Page 20; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABP72694 standard; peptide; 15 AA.
                                                                                                                                                                                                    01-APR-2002; 2002WO-US010116.
                                                                                                                                                                                                                                                 31-MAR-2001; 2001US-0280624P.
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                                                                                                                                                                                                                                                                                           (TEXA ) UNIV TEXAS SYSTEM
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                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-040645/03
                                                                                                                                                                                                                                                                                                                                       Nishiyama
                                                                 Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 15 AA;
                                                                                                           WO200279223-A2
                                                                                                                                                        10-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
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                                                                                                                                                                                                                                                                                                                                       Paul S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 28
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ID ABP7
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AC ABP7
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The invention relates to a synthetic chimeric fimbrin peptide. The peptide is useful for treating a non-typable Haemophilus influenzae (NTH1) infection and otitis media. The synthetic peptides do not require tedious purification techniques. The present sequence represents the amino acid sequence of a Clostridium tetani T-cell epitope #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Multimeric protein; interleukin 5; IL5; TNPalpha; inflammatory disease;
tumour necrosis factor alpha; gene therapy; arthritis; epitope;
                                                                                                                                                                                                                                                                                Synthetic chimeric fimbrin peptide, useful for treating Haemophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 100.0%; Score 74; DB 6; Length 15; I Similarity 100.0%; Pred. No. 9.4e-07; 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bratt T, Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus toxoid epitope (P2) peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAO30454 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                      Claim 6; Col 4; 16pp; English.
                                                                                            98US-00148711.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-NOV-2001; 2001DK-00001702.
                                                                                                                               95US-00460502
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kaumaya PTP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                  (OHIS ) UNIV OHIO STATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                  influenzae infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-449558/42.
N-PSDB; AAL61290.
                                                                                                                                                                                                                                             WPI; 2003-615247/58.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unidentified.
                 US6436405-B1
                                                                                                                                                                                                         Bakaletz LO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-SEP-2003
                                                                                            04-SEP-1998;
                                                                                                                               02-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-MAY-2003.
                                                        20-AUG-2002.
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(XLYS/) B
(NIEL/) N
(BRAT/) I
(VOLD/)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence is the protein sequence of tetanus toxoid T-cell epitope P2. The invention provides methods for compositions for combatting diseases characterised by deposition of amyloid, such as Alzheimer's disease. Immunisation is preferably effected by administration of analogues of autologues amyloid precursor protein (APP) or beta amyloid (Abeta), the analogues being capable of inducing antibody production against the autologues amyloid disease. Especially preferred as an immunogen is autologous Abeta which has been modified by introduction of one or a few foreign, immunodenmant and promiscuous T-cell epitopes, such as tetanus toxoid P2 epitope. Genetic immunisation against APP or Abeta and vaccination using live vaccines are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel analog of amyloid precursor protein or beta amyloid for treating Alzheimer's disease, has amyloid precursor protein/beta amyloid incorporating B-cell epitope of amyloid protein and foreign T-helper
                                                                     Tetanus toxoid, epitope, amyloid precursor protein; APP; beta amyloid; vaccine, genetic immunisation; nootropic; neuroprotective; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Degan FD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fimbrin; non-typable Haemophilus influenzae; NTHi infection;
otitis medla; epitope; immunogenic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 6; Length 15; 100.0%; Pred. No. 9.4e-07;
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                                                                                                                                                                                                                                                                                                                                                                                                                                 Jensen MR, Nielsen KG, Koefoed P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 120; 122pp; English.
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                                  Tetanus toxoid T cell epitope P2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                             20-AUG-2002; 2002WO-DK000547.
                                                                                                                                                                                                                                                                                              20-AUG-2001; 2001DK-00001231.
22-OCT-2001; 2001US-0337543P.
16-APR-2002; 2002DK-00000558.
16-APR-2002; 2002US-0373027P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C. tetani T-cell epitope #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
11-JUN-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-312718/30.
                                                                                                                                                                                                                                                                                                                                                                                           (PHAR-) PHARMEXA AS
                                                                                                                                               Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; ABZ81992
                                                                                                                                                                                   WO2003015812-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Rasmussen PB,
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epitope.

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Gaps

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Mouritsen S;

ADA25169;

RESULT 29 ADA25169

Query Match

Matches

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Klysner S,
                           ABR82482;
              Query Match
               Best Loca
Matches
                       RESULT 31
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New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
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Example 8; Page 106; 196pp; English

The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (ILE) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a tetanus toxoid epitope peptide. This sequence is used to illustrate the method of the invention

Sequence 15 AA;

ö 100.0%; Score 74; DB 6; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels 1 QYIKANSKFIGITEL 15 QYIKANSKFIGITEL 15 15; Conservative Local Similarity

Tetanus toxoid P2 epitope sequence. ABR82482 standard; peptide; 15 AA. (first entry) 20-NOV-2003

CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; tetanus toxoid; p2; p30; antigen.

Clostridium tetani.

WO2003059379-A2.

24-JUL-2003

17-JAN-2003; 2003WO-DK000031.

17-JAN-2002; 2002DK-0000082.

(PHAR-) PHARMEXA AS.

Voldborg

WPI; 2003-587260/55.

Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the Disclosure; Page 139; 140pp; English. polypeptide

The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least 1 modified CEA polypeptide or of a microorganism nucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a tetanus toxoid (TT) p2 epitope that can be introduced into a CEA polypeptide sequence

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                        Gaps
                        ;
0
   Length 15;
                        0; Indels
 Score 74; DB 7;
Pred. No. 9.4e-07;
; Mismatches 0;
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ch 100.0%;
1 Similarity 100.0%;
15; Conservative 0
                                              1 OYIKANSKFIGITEL 15
                                                                   OYIKANSKFIGITEL 15
 Query Match
Best Local Similarity
Matches 15; Conserv
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RESULT 32 ADC09976

ADC09976 standard; peptide; 15 AA. ADC09976; universal T-cell epitope. Tetanus toxoid TT830-844,

(first entry)

18-DEC-2003

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Gaps

BCG; T-cell; epitope; gastrointestinal; antiulcer.

Clostridium tetani

WO2003072040-A2.

04-SEP-2003

25-FEB-2003; 2003WO-US005421

23-APR-2002; 2002US-0374501P. 25-FEB-2002; 2002US-0360134P.

(ELAN-) ELAN PHARM INC.

Paylor J, Yednock TA;

WPI; 2003-712654/67.

Preventing and/or reducing pathological inflammation by administration of an agent inhibiting alpha-4 integrin or its dimer, useful in treating multiple sclerosis, Crohn's disease, ulcerative colitis or inflammatory bowel disease

Disclosure; Page 17; 89pp; English.

The present sequence is that of a universal T-cell epitope comprising amino acids 830-844 of tetanus toxoid. Universal T-cell epitopes such as this can be used as carriers of peptide agents of the invention that bind alpha-4 integrin or a dimer comprising an alpha-4 integrin subunit. Linkage to a carrier will improve the immune response to a peptide that may be too small to be immunogenic on its own. A method of chronically reducing a patient's pathological inflammation involves administration of an agent that specifically binds to an alpha-4 integrin or a dimer comprising alpha-4 integrin. The agent is administration maintains alpha-4 integrin receptor saturation to chronically suppress maintains alpha-4 integrin receptor saturation to chronically suppress pathological inflammation in the patient. The pathological inflammation is caused by inflammatory disease of the gastrointestinal tract, such as Crohn's disease, ulcerative colitis or inflammatory bowel disease, or is caused by multiple sclerosis (all claimed).

Sequence 15 AA;

Gaps ö ch 100.0%; Score 74; DB 7; Length 15; Similarity 100.0%; Pred. No. 9.4e-07; 15; Conservative 0; Mismatches 0; Indels Query Match Best Local Similarity Matches 15; Conserv

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QYIKANSKFIGITEL 15 1 QYIKANSKFIGITEL 15

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us-09-806-703a-12.rag

ADC89658;

RESULT 33 ADC89658

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Reducing pain or increasing the threshold for nociception in an individual comprises administering an agent capable of inducing an active immune response that targets the individual's autologous tumor necrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes a method for reducing pain or increasing the threshold for nociception in an individual comprising administering an agent capable of inducing an active immune response that targets the individual's autologous tumour necrosis factor alpha (TNFalpha). The agent has analgesic activity, and can be used in a vaccine against autologous TNFalpha. The method is useful in reducing pain or increasing the threshold for nociception in an individual. The method is especially intended for reducing neuropathic pain. The present sequence represents a tetanus toxoid P2 epitope, which is given in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immune response; immunoglobulin; Ig; T helper epitope.
                                                                                                                                                                                                                                                    Rasmussen PB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 74; DB 7; I 100.0%; Pred. No. 9.4e-07;
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                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 2; 120pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Universal T helper epitope, SEQ ID 26.
                                                                                                                                                                                                                                                    Pedersen LH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADL90086 standard; protein; 15 AA.
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                                                                                                                11-MAR-2003; 2003WO-DK000147.
                                                                                                                                                      11-MAR-2002; 2002DK-00000368.
11-MAR-2002; 2002US-0363128P.
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14-MAR-2003; 2003WO-US007995.
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                                                                                                                                                                                                                                                  Pedersen HR, Ebert
                                                                                                                                                                                                                                                                                        WPI; 2003-748335/70.
                                                                                                                                                                                                              (PHAR-) PHARMEXA AS
Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             present invention
                                    WO2003075951-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO2004027049-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 15 AA;
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                                                                                                                                                                                                                                                                                                                                                                                       factor alpha
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                                                                        18-SEP-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Loca
Matches
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요
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a synthetic chimaeric fimbrin peptide LB1 or LB2 comprises a first peptide unit derived from H. influenzae fimbrin, a second peptide unit containing a real epitope and a third linker peptide which connects the first peptide to the second. The chimaeric peptide is useful for inducing an immune response in animals against nontypable Haemophilus influenzae (NTHi) and for preventing or reducing adherence of NTHi to host cells thereby preventing or reducing the severity of otitis media. The present sequence is a clostridium tetani T cell epitope for use in the chimaeric peptides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first peptide unit, T cell epitope as second peptide unit and third linker peptide unit, useful for preventing or reducing severity of otitis media.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pain reduction; nociceptive; nociceptor; immune response; tumour necrosis factor alpha; TNFalpha; analgesic; vaccine; pain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 7; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                          Fimbrin, T cell epitope, vaccine, otitis media, auditory,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neuropathic pain; tetanus toxoid; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tetanus toxoid P2 epitope SEQ ID NO:2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 10; SEQ ID NO 7; 15pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADC81609 standard; peptide; 15 AA.
                                                    ADC89658 standard; peptide; 15 AA
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                                                                                                                                                                                                                                                                                                                                                                                   19-AUG-2002; 2002US-00223711.
                                                                                                                                                                                                                                                                                                                                                                                                                         98US-00148711
                                                                                                                                                                  C. tetani T cell epitope #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kaumaya PTP;
                                                                                                                              01-JAN-2004 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             (BAKA/) BAKALETZ L O.
(KAUM/) KAUMAYA P T P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-810881/76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                Clostridium tetani
                                                                                                                                                                                                                            antiinflammatory.
                                                                                                                                                                                                                                                                                                      US2003113344-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bakaletz LO,
                                                                                                                                                                                                                                                                                                                                                                                                                       04-SEP-1998;
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Synthetic

ADC81609;

RESULT 34 ADC81609

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Gaps

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Indels

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                             Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
                                                                                                                      The present invention relates to a method for generating an immune response to an antigen in a patient. The method comprises administering to the patient an immunoglobulin (Ig) or its portion where the Ig has at least one peptide epitope of the antigen attached to the Ig or its portion and administering the immunoglobulin or its portion in conjunction with a RNA segment. The present sequence is an antigen sequence, used to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a ghrelin analogue comprising a ghrelin B-cell epitope and non-ghrelin chemical moieties to the immune system, thereby inducing the production of antibodies against the
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunizing against autologous ghrelin in animals e.g. human beings, asstul for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; tetanus toxin; P2 epitope;
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0
                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; Live 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tetanus toxin P2 epitope, SEQ ID NO:7.
                                                                                          Disclosure; Fig 1J; 154pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADM06894 standard; protein; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-SEP-2003; 2003WO-DK000592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-SEP-2002; 2002DK-00001345.
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                                                                                                                                                                                                                                                                                                                                                                OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PHAR-) PHARMEXA AS.
WPI; 2004-295415/27
                                                                                                                                                                                                                                                                                                 Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2004024183-A1
                                                                                                                                                                                                                                                  Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-SEP-2002;
                                                                                                                                                                                                                                                                                    Mac
Local Sim
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                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 36
                                                                                                                                                                                                                                                                                                                                                                                                                                           ADM06894
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compositions comprising ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; vectors and host cells comprising this nucleic acid; a compositions of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or ameliorating obseits by downregulating ghrelin to characterised by excess body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for unregulating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method creatment, prevention or amelioration of anorexia or cachexia. The method creatment and for treating whuch in adjuvant therapy for in creating cancers. The present sequence represents the tetanus toxin P2 epitope, a promiscuous T-cell epitope, which may be used in ghrelin companies.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tetanus toxoid amino acids 830-844 for fusion protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADP02883 standard; peptide; 15 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-OCT-2003; 2003WO-US034527
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-411388/38.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 15 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-MAY-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADP02883;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclein aggregation. This sequence corresponds to the tetanus toxoid peptide corresponding to amino acid 830-844 used in the method of the
involves administering agent that induces immunogenic response
                                                                                                                                                                                                                                                                                                                                                                                                                                 invention.
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Sequence 15 AA;

Length 15; Indels 100.0%; Score 74; DB 8; I 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; 1 QYIKANSKFIGITEL 15 1 OYIKANSKFIGITEL 15 Query Match Best Local Similarity 100. Matches 15; Conservative ઠે a

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Gaps

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RESULT 38

ADP02898 standard; peptide; 15 AA.

ADP02898;

12-AUG-2004 (first entry)

Fusion protein #10 for treating neurodegenerative disorder.

antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.

Synthetic.

WO2004041067-A2.

21-MAY-2004

31-OCT-2003; 2003WO-US034527.

01-NOV-2002; 2002US-0423012P

(ELAN-) ELAN PHARM INC. (REGC) UNIV CALIFORNIA.

Masliah E; Schenk DB,

WPI; 2004-411388/38.

Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.

Disclosure; SEQ ID NO 31; 78pp; English.

The invention relates to a method of preventing (MI) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manifacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.

Sequence 15 AA;

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                                                                                                                                                                                                                                                                                                                                                                                            Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                     Gaps
                                                                                                                                                                                     antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                     ö
  Length 15;
                   0; Indels
 100.0%; Score 74; DB 8; I
100.0%; Pred. No. 9.4e-07;
                    Mismatches
                                                                                                                                                                  Tetanus toxoid amino acids 830-844.
                                                                                                        ADP02876 standard; peptide; 15 AA.
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                                                                                                                                                                                                                                                                                    31-OCT-2003; 2003WO-US034527.
                                                                                                                                                                                                                                                                                                        01-NOV-2002; 2002US-0423012P.
                                                                                                                                               (first entry)
                                                  QYIKANSKFIGITEL
                    Conservative
                                      1 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                         (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                        Schenk DB, Masliah E;
                                                                                                                                                                                              aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-411388/38.
                                                                                                                                                                                                                          Clostridium tetani.
         Similarity
15; Conserv
                                                                                                                                                                                                                                              WO2004041067-A2
                                                                                                                                               12-AUG-2004
                                                                                                                                                                                                                                                                 21-MAY-2004.
                                                                                                                           ADP02876;
Query Match
           Local
                   Matches
                                                                                      RESULT 39
                                                                                               ADP02876
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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response aggainst alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to amino acids 830-844 of the tetanus toxoid protein used in the method of the invention.

Disclosure; SEQ ID NO 9; 78pp; English.

beta-amyloid

Sequence 15 AA;

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Gaps
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100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                               15; Conservative
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Best Local Similarity
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1 OYIKANSKFIGITEL 15

QYIKANSKFIGITEL 15

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WO2004041310-A1
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                                                                                                                                                                                                     Heegaard P,
                                                                                                              21-MAY-2004
                                                                                                                                                                                                                                                                                 dendrimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADP48561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   epitope
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ID ADP4
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                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclein aggregation. This sequence corresponds to the tetanus toxoid peptide corresponding to amino acid 830-844 used in the method of the
                                                                                                                                                                                                                                                                                                                                              Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                           antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tetanus toxoid peptide #1 for carbohydrate dendrimer conjugate.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                    Tetanus toxoid amino acids 830-844 for fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 74; DB 8; L
Pred. No. 9.4e-07;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 18; 78pp; English.
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                    ADP02885 standard; peptide; 15 AA.
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                                                                                                                                                                                                                       31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                            01-NOV-2002; 2002US-0423012P
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                                                                (first entry)
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Best Local Similarity 100.0
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                                                                                                                                                                                                                                                                 (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                    Masliah E;
                                                                                                                                 Parkinson's disease.
                                                                                                                                                                                                                                                                                                                         WPI; 2004-411388/38.
                                                                                                                                                      Clostridium tetani.
                                                                                                                                                                           WO2004041067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15 AA;
                                                                                                                                                                                                                                                                                                                                                                                beta-amyloid
                                                                12-AUG-2004
                                                                                                                                                                                                  21-MAY-2004
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                                                                                                                                                                                                                                                                                                    Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nvention.
                                         ADP02885;
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RESULT 40
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           ADP02885
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The invention relates to a method of synthesizing chemoselectively a carbohydrate dendrimer (CD) conjugate having a specific structure containing a functional dendrimer, a residue of a carbohydrate, and a residue of an immunomodulating substance. (CD) is useful in the creatidue of an immunomodulating substance. (CD) is useful in the production of antibodies, as a targeting compound, in medicine, in combinition of bacterial adhesion, inhibition of toxins and other such bacterial toxins in combinition of carbohydrate-mediated virus entry into host cells, in chibition of carbohydrate-mediated virus entry into host cells, in chibition of carbohydrate-mediated virus entry into host cells, in carbohydrate-mediated virus entry into host cells, in companient of an inhigh-throughput screening. (CD) are useful for treating and/or preventing bacterial diseases such as sinfection with HIV, hepatitis or influenza, fungal diseases and certain types of cancer such as carcinomas or melanomas. The method enables fast and efficient synthesis of dendrimer conjugates cancer and efficient synthesis of dendrimer conjugates controlled chemical structure. This sequence corresponds to a tetanus toxoid peptide sequence used in the method of the invention.
        anti-HIV; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
antibacterial; virucide, fungicide, hepatotropic; anti-HIV; cytostat
vaccine; bacterial adhesion inhibitor; toxin action inhibitor;
carbohydrate dendrimer; immunomodulating substance; HIV; hepatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthesizing chemoselectively carbohydrate dendrimer conjugate havin carbohydrate residue and immunomodulating substance, by identifying chemoselective and carbohydrate residue, and binding residues to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chimeric binding protein; immunogenic; B-cell epitope; scaffold protein structure; major histocompatibility complex; MHC; Class II; cytostatic; vaccine; cancer; promiscuous; tetanus toxoid;
                                                                                                                             influenza; fungal disease; cancer; carcinoma; melanoma; poliovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (DAFO-) DANMARKS FODEVARE OG VETERINAERFORSKNING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 20; 81pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADP48561 standard; peptide; 15 AA.
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100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-NOV-2002; 2002DK-00001724.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-NOV-2003; 2003WO-DK000766
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Query Match
Best Local Similarity lov...
Best Local Similarity lov...
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                                                                                                                                                                                                               Clostridium tetani
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The invention relates to a method of in vitro antigen specific activation of antibody producing cells by culturing a population of isolated, non-adherent mononuclear immune cells, which population comprises T helper cells or its functional equivalent, where the antibody producing cells and a functionally insignificant number of lysosome-containing cells, for a time and under conditions sufficient to induce differentiation of the antibody producing cell. The method is useful for in vitro antigen specific activation of antibody producing cells. This sequence corresponds to an epitope from the tetanus toxoid protein and used in the
                                                                                                                                                                                                                                                                                                             cells
mononuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T-cell stimulatory peptide; immunogen; non-dendritic; carrier; tumour; scaffold; inhibition; metastasis; wound healing; solid phase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Non-dendritic peptide carrier linked to a solid phase - useful as a
                                                                                                                                                                                                                                                                                                          In vitro antigen specific activation of antibody producing cells comprises culturing a population of isolated, non-adherent mononuc immune cells for a time and under conditions sufficient to induce differentiation of the cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-cell stimulatory peptide SEQ ID NO:51.
                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 23; SEQ ID NO 2; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW35445 standard, peptide; 16 AA.
                                                                                                                                                                       (APOL-) APOLLO LIFE SCI PTY LTD
                                                                                                                            10-DEC-2002; 2002US-0432395P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97WO-DK000146.
                                                                            10-DEC-2003; 2003WO-AU001655.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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nes 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PEPR-) PEPRESEARCH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1997-512645/47.
                                                                                                                                                                                                                                                                  WPI; 2004-487905/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 15 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-APR-1996;
                                   24-JUN-2004.
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22-APR-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW35445;
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                                                                                                                                                                                                                    Chen J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAW35445
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à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a novel chimeric binding protein that is immunogenic in an animal. The chieric binding protein binds specifically to a first receptor that binds a second receptor present in an antigen of the animal, where the chimeric binding protein has: a B-cell epitope in the form of a binding site; a scaffold protein structure, autologous in the form of a binding site; and cat least one tolerance breaking amino acid sequence, which is heterologous in the animal and which binds to a major histocompatibility complex (MHC) class II molecule in the animal. The invention further comprises: a nucleic acid fragment that encodes the chimeric binding protein, a vector carrying the nucleic acid fragment acid fragment; a transformed cell carrying the vector; a composition for inducing production of antibodies against an antigen in the autologous host comprising the chimeric binding protein acid fragment and carrier, and down-regulating a self-cantigen or a cell that displays epitopes of the self-antigen in an animal. The chimeric binding protein has cytostatic activity. The chimeric binding protein has cytostatic activity. The chimeric binding protein has protein a vaccine against e.g. cancer. This sequence represents a 'promiseuous' T-H tetanus toxoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                              New chimeric binding protein comprising a B-cell epitope, a scaffold protein structure and a tolerance breaking amino acid sequence, useful in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 8; Length 15; 100.0%; Pred. No. 9.4e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      epitope peptide for use in the vaccine of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antigen specific activation; antibody producing cell; non-adherent mononuclear immune cell; T helper cell; lysosome-containing cell; differentiation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide epitope from tetanus toxoid protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              preparing a vaccine against e.g. cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure, SEQ ID NO 1, 61pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADP76011 standard; peptide; 15 AA.
                                                                                                                                                                                          11-DEC-2002; 2002DK-00001893.
11-DEC-2002; 2002US-0432532P.
12-FEB-2003; 2003DK-00000198.
12-FEB-2003; 2003US-0446707P.
                                                                                                                                             11-DEC-2003; 2003WO-DK000859
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Best Local Similarity 100.0
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-468817/44.
                                                                                                                                                                                                                                                                                                          (PHAR-) PHARMEXA AS
         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani
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                                                      WO2004052930-A2
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                                                                                                                                                                                                                                                                                                                                                        Mouritsen S;
                                                                                                    24-JUN-2004
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present invention describes a conjugate (A) comprising a
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                                                                                                                                                                                                                                                                                        Query Match
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                                                                             through a linker to a solid phase, forming a complex of (A)-solid phase.

Where (A) comprises 10-50 amino acids capable of forming a secondary

Structure in a benign buffer after liberation from the solid phase, and
further the (A)-solid phase complex comprises an immunogenic substance
and/or an immune mediator coupled on (A). The present sequence represents
and/or an immune mediator coupled on (A). The present sequence represents
and/or an immune mediator coupled on (A) the present sequence represents
a specifically claimed T-cell stimulatory peptide from the present
invention. An (A)-solid phase complex can be used as a scaffold for the
production of chemical derivatives, characterised by covalently attaching
molecules at attachment points. Alternatively (A) is used as a scaffold-
complex peptide for the incorporation into an Immunostimulating complex (Iscom)
resulting an (A)-Iscom complex which is used for the chemical coupling of
antigenic substances in an aqueous solution by conjugation. (A)
cartigenic substances in an aqueous solution by conjugation. (A)
cartigenic substances in an aqueous solution by conjugation. (A)
carticohectin-like binding activities can be used for the promotion of cell
attachment to plastic surfaces, in particular to inhibit tumour growth
and metastasis, and for promotion of wound healing. Also a derivatised
(A) can be used for the selection of specifically-binding aptamers or as
a diagnostic agent. Such diagnostic-(A) molecules could be used to detect
molecules derived from or indicative of presence (Updated on 25-MAR-
                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                    non-dendritic peptide carrier (A) has been developed which is coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conjugate of hepatitis B core protein, modified to increase reactivity with hapten, used to raise antibodies against the hapten, e.g. in
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human hepatitis B core protein; HBc; modified; immunodominant; nucleocapsid protein; vaccine; T cell epitope.
diagnostic agent and as a scaffold for production of chemical
                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 2; Length 16; 100.0%; Pred. No. 1e-06; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani antigen tox polypeptide hapten.
                                         Claim 30; Page 199; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 3; Page 38; 128pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY29705 standard; protein; 16 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                         to correct PF field.
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 100.
Les 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 16 AA;
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              derivatives
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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Matches
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trategically modified hepatitis B core (HEC) protein (1) attached to a hapten, where (I) includes amino acids (aa) 10-140 of the wild type HBC (183 as sequence (given in AAY29674) and additionally has an insert (II) in the region corresponding to aa's 50-100, where the insert is of 1 to about 40 aa's and contains a chemically reactive as residue linked to the nature. A vaccine containing (A), optionally in the form of particles, is used to induce a protective antibody response against the pathogen from which the hapten is derived, in humans or other animals. These pathogens which the hapten is derived, in humans or other animals. These pathogens can be bacteria, viruses, rickettsia or protoxoa. Insertion of (II) increasing the reactivity of as side chains in native HBC protein, increasing the reactivity with hapten and resulting in conjugates of improved immunogenicity. Modified HBC can be derivatised in the form of particles by well-defined chemical methods, and is unlikely to cause immunological side-effects. AAX29675 to AAX29735 represent polypeptide haptens used in an example from the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer;
Tetanus toxoid precursor peptide; tentoxylysin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 2; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tetanus toxoid precursor peptide, tentoxylysin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure, Page 28; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU11413 standard; peptide; 16 AA.
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Matches 15; Conservative
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immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is Tetanus toxoid precursor peptide, tentoxylysin, a promiscuous helper T-cell peptide epitope used in the immunogen of the invention
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Sequence 16 AA;

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Gaps
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Score 74; DB 5; Length 16;
Pred. No. 1e-06;
; Mismatches 0; Indels
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 100.0%;
100.0%;
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nes 15; Conservative
Query Match
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Matches
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1 OYIKANSKFIGITEL 15 OYIKANSKFIGITEL 16

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AAU93865 standard; peptide; 16 AA. 02-JUL-2002 AAU93865; RESULT 47 AAU93865

(first entry)

Clostridium tetani tox T cell epitope.

Immunogenic, hepadnavirus nucleocapsid protein; hepatitis B core, HBc, vaccine, B cell epitope, T cell epitope; immunostimulant.

Clostridium tetani

WO200214478-A2.

21-FEB-2002

16-AUG-2001; 2001WO-US041759.

22-AUG-2000; 2000US-0226867P. 15-AUG-2001; 2001US-00930915. 16-AUG-2000; 2000US-0225843P.

(APOV-) APOVIA INC

Birkett AJ;

WPI; 2002-257601/30.

Novel recombinant hepadnavirus nucleocapsid protein, termed as chimeric hepatitis B core protein, displays immunogenic epitopes at N-terminus, HBc immunogenic loop with linker for conjugated epitope and C-terminus.

Disclosure; Page 43; 289pp; English.

The invention relates to a recombinant hepadnavirus nucleocapsid protein, i.e. a chimeric hepatitis B core (HBC) protein (1), displaying one or more immunogenic pitopes at the N-terminus, HBC immunogenic loop (L) or C-terminus, or having a heterologous linker for a conjugated epitope in (L), and containing a Cys residue at, or near, the C-terminus that confers enhanced stability to the particles. A vaccine comprising (I) is useful for inducing an immune response in an inoculated animal, by inoculating a host animal with the vaccine, and maintaining that inoculated animal for a time period sufficient for that animal to develop in immune response. The immunogenic particles formed using (I) are substantially free of binding to nucleic acids, and are most stable than the particle formed from otherwise identical HBc chimer that lacks the C-terminal residue or in which a C-terminal CS is replaced by another residue. The chimer particles are most stable on storage in aqueous compositions that are particles of similar sequence that lack any C-

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                      exhibiting the nucleic acid binding of those native particles, and excellent. B cell and T cell immunogenicities. The chimer particles are typically prepared in higher yield than similar particles that are free of a C-terminal Cys. The particles are often far more immunogenic than the similar conjugates that lack a C-terminal Cys. Immunogenic than particles assembled from the chimer molecules are enhanced as compared to similar particles assembled from chimer molecules are enhanced as compared to terminal Cys. AAU93802-AAU93997 represent immunogenic HBc particles amino acid sequences and related sequences of the invention
The chimer molecule exhibits the self-assembly not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hepatotropic; virucide; antiinflammatory; chronic hepatitis; vaccine; recombinant hepatitis B core chimeric protein; HBc chimeric protein; hepatitis B infection; T-cel stimulator; B-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                           Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 5; Length 16
100.0%; Pred. No. 1e-06;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADE10941 standard; peptide; 16 AA.
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21-FEB-2002; 2002US-00082014.
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cerminal Cys residues.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PAGE/) PAGE M.
(FRIE/) FRIEDE M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2003198645-A1
                                                                                                                                                                                                                                                                                                                                             Sequence 16 AA;
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Matches
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Treating chronic hepatitis B infection by administering a T cell-stimulating vaccine containing immunogenic particles having recombinant carboxy-terminal truncated hepatitis B core (HBc) chimeric protein molecules.

WPI; 2003-852775/79.

Disclosure; SEQ ID NO 175; 111pp; English.

The invention describes a method of treating chronic hepatitis comprising administering to a patient a T cell-stimulating amount of a vaccine comprising immunogenic particles dissolved or dispersed in a diluent, where the immunogenic particles consists of recombinant hepatitis B core (HBC) chimeric protein molecules, and maintaining the patient to induce T cells activated against HBC. The methods and compositions of the present invention are useful for treating chromic hepatitis B infection. This is the amino acid sequence of a chimeric hepatitis B infection. This is the amino acid sequence of a chimeric hepatitis B virus related B-cell epitope useful for expression within the HBV chimer at the N-terminus, within the immunoigenic loop and/or at the C-terminus.

Sequence 16 AA;

QYIKANSKFIGITEL 16

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RESULT 50

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cytokine-derived peptide, useful as vaccine for treating conditions sed by excess cytokine, contains residues closely associated with a
                                                                                                                                                                                                                                                                                                                                                        immunosuppressive; neuroprotective; antirheumatic; antiarthritic; antibsoriatic; antidiabetic; dermatological; antiinflammatory; antiallergic; antiasthmatic; cytostatic; anti-HIV; vaccine; cytokine; multiple sclerosis; rheumatoid polyarthritis; psoriasis; autoimmune diabetes; lupus; allergy; asthma; cancer; AIDS;
                                                   Gaps
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         100.0%; Score 74; DB 7; Length 16; 100.0%; Pred. No. 1e-06;
                                                 0; Indels
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                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 13; SEQ ID NO 55; 42pp; French.
                                                                                                                                                                                                            ADK41128 standard; peptide; 16 AA.
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                                                                                                                                                                                                                                                                                                                        Tetanus toxin T-cell epitope.
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                                                                                                                   1 OYIKANSKFIGITEL 15
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Query Match
Best Local Similarity 100.
Marches 15; Conservative
                                                                                   1 OYIKANSKFIGITEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ZAGU/) ZAGURY J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003084979-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 16 AA;
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                                                                                                                                                                                                                                                ADK41128;
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This invention relates to novel recombinant immunogenic chimeric avian hepatitis B core (AHBC) nucleocapsid proteins. Specifically, it refers to an AHBC protein that has been engineered to display, an immunogenic B cell cor T cell epitope, exhibit enhanced stability and an absence of nucleic acid binding as a self assembled particle. The present invention acid binding at the chimeric AHBC protein as truncated at the C-terminus and containing introduced cysteine residues that confers an enhanced stability in aqueous solution, an increased yield and more immunogenicity than similar conjugates that lack N- or C-terminal cysteines.

Chysine and arginine) towards the C-terminus prepares self-assembled particles that are substantially free of nucleic acid binding. As such, these composition in the number of postively charged residues (Iysine and arginine) towards the C-terminus prepares self-assembled can also be useful for developing a vaccine to produce antibodies. It can also be useful for developing a vaccine to produce antibodies. It can also be useful for developing exitibit immunoserimitant, antibacterial and virucidal activities. This peptide sequence is an exemplary T-cell epitope peptide immunogen useful for both linkage to the linker residue con the contemplated chimer and for expression within an energy or the contemplated chimer and for expression within an energy and the contemplated chimer and for expression within and contemplates.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful as
                                                                                                                                                                                             immunogenic; avian hepatitis B virus; nucleocapsid; self assembled particle; immunogen; inoculum; vaccine; immunostimulant; antibacterial; virucidal; T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New recombinant chimer avian hepatitis B core protein molecule, u
an immunogen for inducing a B cell or T cell response to produce
antibodies, or as a vaccine against pathogens.
                                                                                                                                                    C_tetani T-cell peptide epitope expressed by HBc chimer Seg 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 165; 278pp; English.
                  ADM39833 standard; peptide; 16 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-FEB-2002; 2002US-0359129P.
                                                                                                                                                                                                                                                                                                                                                                                                                       21-FEB-2003; 2003WO-US005315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HBc chimer of the invention.
                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Birkett AJ, Peck B;
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                                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                                                                                                                                                                               WO2003072722-A2.
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                                                                ADM39833;
ADM3983
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Gaps ; 0

100.0%; Score 74; DB 7; Length 16; 100.0%; Pred. No. 1e-06; Live 0; Mismatches 0; Indels

Conservative

Query Match Best Local Similarity Matches 15; Conserv

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Gaps

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100.0%; Score 74; DB 7; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels

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Best Local Similarity 100.0
Matches 15; Conservative

ADG64012

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The present invention relates to antigenic peptides derived from tumour suppressor protein WT1 which induce HLA-A24 restricted cytotoxic T-lymphocytes. The peptides can be used in the preparation of cancer vaccine for treatment and prevention of cancer, including leukaemia, multiple myeloma, lymphoma, and cancer of the stomach, colon, breast, liver, ovary, skin, pancreas, prostate and womb. The present sequence is a polypeptide used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antigenic peptides derived from WT1 which induce HLA-A24 restricted cytotoxic T-lymphocytes for production of cancer vaccine and treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
Human, mouse, HLA-A24-restricted cancer antigen, antigen; cancer,
tumour suppressor protein, cytostatic, WT1; vaccine.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8; Length 16;
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                                                                                                                                                                                                                                                                                                                                                                         Takasu H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prostate cancer; ovarian cancer.
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(SUMU ) SUMITOMO PHARM CO LID.
(SUGI/) SUGIYAMA H.
                                                                                                                                                                                                                                                                                        CHUGAI SEIYAKU KK.
SUMITOMO PHARM CO LTD.
                                                                                                                                                                                     12-JUN-2003; 2003WO-JP007463.
                                                                                                                                                                                                                            12-JUN-2002; 2002JP-00171518.
20-SEP-2002; 2002JP-00275572.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and prevention of cancer.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                (SUGI/) SUGIYAMA H.
                                                                                                    WO2003106682-A1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 16 AA;
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                                                                                                                                                                                                                                                                                                                                                                         Sugiyama H,
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                                                                                                                                             24-DEC-2003
                                                              Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a recombinant chimer hepatitis B core (HBC) protein molecule that includes a peptide-bonded heterologous immunogenic epitope at the N-terminus in the HBC immunodeninant loop or the C-terminus of the Chimer, or a heterologous linker residue for a conjugated epitope present in the loop. The invention also relates to an immunogenic particle comprising the recombinant hepatitis B core chimeric protein molecules, a vaccine comprising the immunogenic particles dissolved or dispersed in a diluent, a nucleic acid that encodes a recombinant HBC protein molecule or its variant, analogue, or complement and a method for inducing an immune response in an inculated host animal consultating a host animal with a vaccine and maintaining the incoulated animal for a period of time sufficient to enable development of an immune cresponse. The recombinant chimer hepatitis B core protein molecule is used in an immunogenic particle for preparing a vaccine useful for inducing an immune response in an inoculated host animal. This sequence represents an HBC protein immunogenic B cell epitope of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Recombinant chimer hepatitis B core protein molecule useful for preparing vaccine or inoculum includes peptide-bonded heterologous immunogenic epitope at N-terminus in the hepatitis B core immunodominant loop or C-
                                                                                                                                                                               ombinant chimer hepatitis B core protein; HBc; immunogenic epitope; immunodominant loop; immune response.
                                                                                                                                           Recombinant chimer hepatitis B core protein immunogenic epitope #134.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 74; DB 8; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; 1e-06;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 145; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAO24402 standard; peptide; 16 AA.
                   ADG64012 standard; peptide; 16 AA
                                                                                                                                                                                                                                                                                                                                                                         21-FEB-2002; 2002US-00082014
                                                                                                                                                                                                                                                                                                                                                                                                                  15-AUG-2001; 2001US-00930915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-MAY-2004 (first entry)
                                                                                                    (first entry)
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Les 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           epitope at N-terminus in 
terminus of the chimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-031988/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BIRK/) BIRKETT A J.
                                                                                                                                                                                                                                               Clostridium tetani
                                                                                                                                                                                                                                                                                        US2003185858-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 16 AA;
                                                                                                    11-MAR-2004
                                                                                                                                                                                     Recombinant
                                                                                                                                                                                                                                                                                                                                02-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Birkett AJ;
                                                           ADG64012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAO24402;
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Matches

RESULT 52

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residues and contains four peptide-linked amino acid residue sequence

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Sugiyama H,
                                            Clostridium
                                         09-SEP-2004
                                                       24-JUN-2004
                                                                Lyons К,
                                       ADP73582;
         cancer.
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                                                                                                                                                                                                                                                                                                                          The specification describes WT1 substitution peptides, in which a cysteine residue is substituted with another amino acid residue. The WT1 substitution peptides have CTL induction activity. Peptides of the invention are used in cancer vaccines, which are applicable in the treatment of e.g. stomach cancer, prostate cancer and ovarian cancer. The present peptide represents a peptide that is mentioned in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New recombinant chimer hepatitis B core (HBC) protein molecules useful in the fields of immunology and protein engineering, in particular as an immunogen in a vaccine for Hepatitis B infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel recombinant chimeric Hepatitis B virus nucleocaspid (core) protein (HBC), up to 600 or 380 amino acid residues in length. The chimeric protein is engineered for both enhanced stability of self-assembled particles and the substantial absence of nucleic acid binding by the particles. The invention further comprises: a recombinant HBC protein chimeric molecule that has a length of 135-365 amino acid
                                                                                                                              Novel WT1 substitution peptides with cysteine replaced by specific amino acid residue and their encoded polynucleotide for cancer vaccines with CTL induction activity for treatment of e.g. stomach cancer and prostate
                                                                                                                                                                                                                                                                                                            in which a
                          Nakatsuka M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  transgenic animal, Hepatitis B virus nucleocaspid core protein; HBc; enhanced stability; hepatotropic; virucide; immunology; protein engineering; immunogen; vaccine; Hepatitis B infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 8; Length 16; 100.0%; Pred. No. 1e-06; ive 0; Mismatches 0; Indels
                          Kusunose N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tetani T cell epitope of gene tox.
                       Samizo F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 195; 338pp; English.
                                                                                                                                                                                                                                                                           Disclosure; Page 18; 65pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADP73582 standard; peptide; 16 AA.
                       Takasu H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Haron JA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-DEC-2002; 2002US-0432123P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QYIKANSKFIGITEL 16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.
Matches 15; Conservative
                       Gotoh M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Birkett AJ,
                                                                         WPI; 2004-295379/27.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (APOV-) APOVIA INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2004053091-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 16 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification.
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domains from the N-terminus that are denominated Domains I, II, III and 1V. The invention also provides nucleic acids, polypeptides, host cells, vectors and transgenic animals used in the methods of the invention. The chimeric compositions of the invention have hepatotropic and virucide useful in the fields of immunology and protein engineering, in particular for using a chimeric hepatitis B virus nucleocapsid protein as an immunogen in a vaccine for Hepatitis B infections. This sequence represents a Hepatitis B virus nucleocapsid core; This sequence polypeptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This invention relates to novel mutant peptides derived from SYT-SSX. Specifically, it refers to a peptide S393, which is a modified tumour antigen peptide that can be used as the active ingredient in a cancer vaccine. The present invention describes the development of mutant peptides that exhibit increased binding affinity to the HLA-A24 antigen, and as such have a favourable cytotoxic lymphocyte (CTL) induction activity. Accordingly, these peptide epitopes can be used to treat patients suffering from various tumours including synovial sarcoma, and furthermore they exhibit cytostatic activities. This peptide sequence is a helper peptide related to the S393 peptide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SYT-SSX; SS393; tumour antigen peptide; cancer vaccine;
cytotoxic lymphocyte induction; synovial sarcoma; tumour; cytostatic;
helper peptide.
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel mutant peptide of SYT-SSX origin, useful as pharmaceutical composition of cancer vaccine for inducing cytotoxic T cells, and as
                                                                                                                                                                                                                                                                                                      ő
                                                                                                                                                                                                                                                        100.0%; Score 74; DB 8; Length 16; 100.0%; Pred. No. 1e-06; 1.ve 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Helper peptide related to the SS393 peptide SeqID 8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 74; DB 8;
Pred. No. 1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 8; 28pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADP90539 standard; peptide; 16 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-DEC-2002; 2002JP-00350633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-DEC-2002; 2002JP-00350633
                                                                                                                                                                                                                                                                                                                                           1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                  SATO N. SUMITOMO SEIYAKU KK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                    15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnostic of tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-472266/45.
                                                                                                                                                                                                                                                                                 Local Similarity
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Best Local Similarity
                                                                                                                                                                                                                       Sequence 16 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 16 AA;
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                                                                                                                                                                                                                                                               Query Match
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                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 55
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Matches

ઠે 셤 RESULT 56 AAR62692

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AAR82571-91 are helper T cell epitopes which can be used in the preparation of a peptide immunogen that is useful in vaccines for treating allergic reactions. In the immunogen an IGE CH4 peptide is attached C-terminally to a series of amino acids including a helper T cell epitope. The immunogen may also opt. contain a fatty acid or fatty acid derivative, an invasin domain or alpha-NH2. The immunogen produces high titres of antibodies to the effector site in human IGE heavy chain (the CH4 domain peptide) which inhibit mast cell activation and reduce allergen-induced IGE prodn. The immunogens may be used in either a radially branching multimeric form or a linearly arranged monomeric form
                                                                                                                                                               IgE; CH4; immunoglobulin; epsilon; immunogen; helper T cell; epitope; vaccine; allergy; antibody; constant heavy chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic peptide-based immunogen contg. IgB CH4 peptide and helper cell epitope - useful for eliciting antibody prodn. for allergy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T-antigen; vaccine; antibody; T-cell; T-lymphocyte; alpha-helix; colled-coil heterodimer; core peptide; subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 2; 1 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                             Tetanus toxin helper T cell epitope, TT1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 3; Page 59; 87pp; English.
        AAR82573 standard, peptide, 17
                                                                                                                                                                                                                                                                                                                                                                               94US-00218461.
94US-00328912.
                                                                                                                                                                                                                                                                                                                                                                                                                                       (UNBI-) UNITED BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OXIKANSKFIGITEL 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T-cell antigen TT2 peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-JUN-1996 (first entry)
                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
Les 15, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1995-351297/45.
                                                                                                                                                                                                                         Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 17 AA;
                                                                                                                                                                                                                                                                WO9526365-A1
                                                                                                                                                                                                                                                                                                                                          24-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                 28-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                   25-OCT-1994;
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                                                                                      13-JUN-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 treatment
                                                  AAR82573;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wang CY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 58
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic I lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HiA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequence from the invasin protein of Yersinia. Spacer amino acid sequence is ally-day, can be provided between the invasin and Th domains and between the inmune stimulator and hapten components. Mann the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component. The present sequence represents a tetanus toxin helper T cell epitope which can be used as Th in the immune stimulator. (Updated on 25-MAR-2003 to correct PN field.)
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            Gaps
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                                                                                                                                                                                                                                                                                                                                                           Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
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                                                                                                                                                                                                                                                                                                                      Helper T cell epitope for use in universal immune stimulator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 2; Length 17; 100.0%; Pred. No. 1.1e-06; Live 0; Mismatches 0; Indels
            Indels
            ö
          Mismatches
                                                                                                                                                                                 AAR62692 standard; peptide; 17 AA.
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94US-00229275.
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                                                                                                                                                                                                                                                              (revised)
(first entry)
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Best Local Similarity 100.
Matches 15; Conservative
            Conservative
                                                                                  OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                 vaccine; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1994-357910/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ladd AE, Wang CY,
                                                                                                                                                                                                                                                                                                                                                                                                                     Clostridium tetani
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-APR-1993;
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10-SEP-1995
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            15;
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Gaps

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RESULT 57 AAR82573

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Length 17; Indele WPI; 1996-230555/23

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This T-cell antigen TT2 peptide may be attached to a core peptide contained in one of the 2 subunits of an alpha-helical coiled-coil heterodimer. Each core peptide is comprised of terminal and internal AA repeat sequences. This peptide antigen is attached to the core peptide through covalent linkages to certain AA of the internal repeats. The 2 subunits of the heterodimer are arranged in a stable alpha-helical coiled coil configuration having a 1:1 stoichiometry, and the peptide antigen is disposed toward the outer surfaces of the configuration. The heterodimer may be used as a synthetic vaccine (optionally multivalent)
                                                                                                                                                                                           Hetero:dimeric polypeptide immunogen in coiled-coil configuration with different antigens on each sub:unit - useful in vaccines and for antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunoglobulin, IgE; membrane protein; human; epsilon chain; hepatitis B; membrane anchoring domain; helper T cell; surface antigen; core antigen; pertussis toxin; tetanus toxin; measles virus F protein; immunotherapy; Chlamydia trachomatis major outer membrane protein; immunogen; vaccine; diphtheria toxin; plasmodium falciparum; circumsporozoite; E. coli TraT; schistepoma mansoni; triose phosphate isomerase; allergenic reaction; allergic rhinitis; food allergy; anaphylaxis; virally-induced asthma; antihistamine; decongestant; beta-2 agonist; immunosuppression;
                                                                                                                                Irvin RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                Cachia PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 2; I 100.0%; Pred. No. 1.1e-06;
                                                                                                                                Hodges RS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tetanus toxin helper T cell epitope #1.
                                                                                              (SPIS-) SPI SYNTHETIC PEPTIDES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW05599 standard; peptide; 17 AA.
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                                                                                                                                                                                                                                                         Claim 7; Page 61; 95pp; English
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                                                                94US-00245507.
                                95WO-CA000293
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                                                                                                                                Kay
                                                                                                                                                                                                                                                                                                                                                                                                                                         to generate antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 100.
es 15; Conservative
                                                                                                                              Zhou NE,
                                                                                                                                                             WPI; 1996-010880/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              corticosteroid
                                18-MAY-1995;
                                                              18-MAY-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9612740-A1
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23-NOV-1995
                                                                                                                              Houston ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW05599;
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Best Local 9
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(UNBI-) UNITED BIOMEDICAL INC

Walfield AM;

Wang CY,

94US-00328519.

25-OCT-1994;

25-OCT-1995;

02-MAY-1996

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Gaps

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AAW05957-W05616 represent helper T cell epitopes used in the peptide immunogens of the invention. This sequence represents the tetanus toxin helper T cell antigen. The peptides of the invention contain one of these sequences, and a membrane-bound immunoglobulin B (19g) fragment (see used in vaccines for the immunoglobulin B (19g) fragment (see used in vaccines for the immunotherapeutic treatment of allergonic reactions, including allergor thinitis, food allergies, anaphylaxis, or virally-induced asthma. The immunogens overcome the short effective preventing the broad immunosuppression of corticosteroids. The peptides do not have the potential side effects of restlessness or sedation associated with natihistamines), associated increased morbidity in asthmatics (as seen with beta-2 agonists) and adverse hormonal activities (observed in corticosteroid users)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New compositions containing immunogenic peptide epitopes for various HLA class II DR molecules useful for inducing helper T cell response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human leucocyte antigen; HLA class II; antigen epitope; pharmaceutical; immune response; chronic viral disease; cancer; autoimmune disease; rheumatoid arthritis; multiple sclerosis; mysathenia gravis; AIDS; allograft rejection; allergy; lyme disease; hepatitis; prostate cancer; glomerulonephritis; food hypersensitivity; malaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                Peptide immunogen useful in treatment of allergy - comprises membran
bound IgE epsilon-chain peptide synthesised linearly in tandem with
helper epitope peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to a new pharmaceutical composition
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HLA class II binding antigen epitope peptide #463
                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 74; DB 2; I
100.0%; Pred. No. 1.1e-06;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY99274 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sidney J;
                                                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 47; 60pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Bust Local Similarity 100.00
Bust Local Similarity 100.00
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                       Claim 2; Page 18; 53pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sette A, Southwood S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIM-) EPIMMUNE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-097143/08
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 17 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY99274;
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comprising a unit dose form of a peptide, or analogue, comprising an epitope selected from those represented by peptides AAY98812-Y99339 which care derived from various antigens for various human leucocyte antigen class DR molecules, representative of the world human leucocyte antigen class DR molecules, representative of the world wide population. The peptide/analogue binds to an HLA class II molecule at an IC-50 of less chan or equal to 1,000 hm. The pharmaceutical can be used to induce a choom viral diseases and cancer. Examples of diseases that can be treated using the peptide containing pharmaceutical include autoimmune crowards selected determinants and could therefore be used in cases of treated using the peptide containing pharmaceutical include autoimmune crowards selection, allergies, lyme disease, hepatitis, post-crost lendocarditis or glomerulonephritis and food food mysethenia cresponses against other immunogens can be used to enhance immune cresponses against other immunogens administered with the peptides. Diseases which can be treated using immunogenic mixtures include prostate cancer, hepatitis B, hepatitis C, AIDS, renal carcinoma, cervical carcinoma, lymphoma, and condytoma acuminatum. The peptides may also be used to make monoclonal antibodies useful as potential diagnostic or therapeutic agents. The peptides may also be useful as diagnostic contengents, for example, to determine the susceptibility of an individuals will be at substantial fisk of developing chronic infection. The selection of appropriate T and B cell epitopes should allow the development of epitope based vaccines particularly towards conserved epitopes of pathogens which are characterized by high sequence conserved epitopes of pathogens which are characterized by high sequence.
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Sequence 17 AA;

Gaps ö Length 17; Indels 100.0%; Score 74; DB 3; L/ 100.0%; Pred. No. 1.1e-06; 1 OYIKANSKFIGITEL 15 Conservative Local Similarity les 15; Conserv Query Match Matches ઠે

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1 QYIKANSKFIGITEL 15

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RESULT 61 AAY58768

AAY58768 standard; peptide; 17 AA. AAY58768;

(first entry) 25-APR-2000

Unidentified peptide.

Helper T cell; Th epitope; feed additive; growth promotion; somatostatin.

Unidentified

W09966950-A1

29-DEC-1999

99WO-US013923 21-JUN-1999; 98US-00100415.

20-JUN-1998;

(UNBI-) UNITED BIOMEDICAL INC.

Wang

WPI; 2000-160560/14.

New somatostatin helper T-cell epitope conjugate for raising anti-somatostatin antibodies to enhance growth rate in animal by reducing growth inhibitory activity of somatostatin.

Disclosure; Page 50-51; 59pp; English

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The present sequence is that of an unidentified peptide of the invention. The invention relates to peptide compositions (see AAYS8739-66) useful as immunogens for growth promotion in farm animals. The immunogenic peptides contain helper T cell epitopes which comprise multiple class II MHC motifs and have somatostatin at either the C- or N-temrinus. They may also include an invasin domain which acts as a general immune stimulator. The helper T cell epitopes and the invasin domain elimune stimulator. The helper T cell epitopes and the invasin domain enhance the immune response against the somatostatin self-peptide
                                                                                                                                                                                                                                                                                                                                                                                    Immunoglobulin E; IgE; epsilon heavy chain; antigenic; antigen; immunogenic; immunostimulatory; carrier protein; helper T cell epitope; antibody; allergy; allergic disease; immunisation; anti-allergic; anti-ashmatic; asthma; anaphylaxis; dermatitis.
                                                                                                                                                                    Gaps
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                                                                                                                                           100.0%; Score 74; DB 3; Length 17; 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                                   0, Indels
                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                            Pathogen derived Th epitope SEQ ID NO:63.
                                                                                                                                                                                                                                                                                   AAY80056 standard; peptide; 17 AA.
                                                                                                                                                                                            1 OYIKANSKFIGITEL 15
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                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                  Sequence 17 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
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BIOMEDICAL INC 99WO-US013959. 98US-00100287. (UNBI-) UNITED 21-JUN-1999; 20-JUN-1998;

Wang CY, Walfield AM;

WPI; 2000-160578/14.

New antigenic peptide from the CH3 domain of immunoglobulin E, fusions for immunization against allergy.

Claim 11; Page 79; 155pp; English.

The present invention describes immunoglobulin E (IgE)-CH3 domain antigenic peptides (1). (1) have anti-allergic, anti-anaphylactic and antigenic peptides (1). (1) have anti-allergic, anti-anaphylactic and anti-asthmatic properties. (1) induces polyclonal antibodies specific for a target effector site on the epsilon-heavy chain of IgE, and so preventing triggering and activation of mast cells and basophils and downregulation of IgE synthesis. Conjugates, or fusion peptides, containing (1) are used for active immunisation against IgE-mediated allergies, e.g. food allergies, asthma, anaphylaxis, or flea-allergy dermatitis. Nucleic acids that encode these compounds are useful for recombinant production of corresponding peptides or in DNA vaccines. Conjugates of (1) that include a promiscuous T halper cell epitope (functional in genetically diverse subjects), in addition to a B cell target epitope, have increased immunogenicity and may include cyclic constraints (disulfide bridge) to stabilise conformational features and maximize cross-reactivity to the natural target. They induce safe (nonanaphylaxica) antibodies. AAY79994 to AAX80084 represent amino acid sequences used in the exemplification of the present invention for

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which is included in vaccines of the invention. The specification describes polyepitopic fragments of human p53, which is overexpressed in many types of cancers. The p53 polyepitopic fragments bind stably to human leukocyte antigen (HLA) type molecules. The p53 peptides induce a specific immune response. They induce cytolysis, by cytotoxic T cells (CTL), of cells that express the p53 peptides associated with appropriate HLA molecules and induce secretion of cytokines (particularly interleukin derivatives, nucleic acids encoding them and specific antibodies are used, in compositions or vaccines, to treat or prevent diseases p53-related cancers, particularly of breast, colon, lung or bladder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present sequence represents an antigenic fragment of tetanus protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New polyepitopic fragments from the p53 protein, useful for treatment or prevention of cancer, e.g. of breast or colon.
                                                                                                                                                                                                                                                                                                                                                             Polyepitopic peptide; p53; cancer; human leukocyte antigen; HLA; immune response; cytolysis; cytotoxic T cell; CTL; cytokine secretion; interleukin-2; IL-2; IL-4; gamma-interferon; p53-related cancer;
  Gaps
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  Indels
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100.0%; Pred. No. 1.1e-06;
iive 0; Mismatches 0;
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Mismatches
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                                                                                                                                                                                                                                                                                                                     Antigenic fragment of tetanus protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 12; 26pp; French.
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                                                                                                                                                                                        AAB31118 standard; peptide; 17
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                                                                                3 OYİKANSKFIĞİTEL 17
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                                                                                                                                                                                                                                                                             (first entry)
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es 15; Conservative
  15; Conservative
                                            1 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-064173/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (BIOV-) BIOVECTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                tetanus protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FR2794368-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-JUN-1999;
                                                                                                                                                                                                                                                                             02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-DEC-2000.
                                                                                                                                                                                                                                     AAB31118;
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  Matches
                                                                                                                                                     64
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AC AAM9
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ID AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence represents a broadly reactive promiscuous T helper cell (Th) epitope derived from tetanus toxin. It is conjugated to antigenic peptides derived from the CDR2-like domain of the human CD4 protein. These antigenic peptides present neutralising receptor/co-receptor effector sites of the CDR2-like domain. The peptides evoke effective antibody responses by having optimises site-specificity. The induced antibodies block human immune deficiency virus (HIV) binding and syncytia formation. They may also block CD4-Class II interactions with cother cells, deliver signals to T cells (inhibiting normal CD4+mediated immunoregulatory functions) or induce apoptosis of CD4 cells by simultaneous engagement of T cell receptors. Conjugates and peptides ontaining the antibodies against CD4 surface complexes, especially to prevent binding of HIV to CD4 and thus HIV infection, but also to treat undesprable immune responses such as transplant rejection, or autoimmune diseases (rheumatoid arthritis, systemic lupus erythematosus or peoriasis). These conjugates produce high-titre antibodies which are broadly neutralising against primary isolates from all classes of HIV-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human, CD4 protein; antigenic peptide; CDR2-like domain; apoptosis; syncytia formation; human immune deficiency virus; HIV binding; CD4-Class II interaction; immunisation; CD4 surface complex; immune response; transplant rejection; autoimmune disease; psoriasis; rheumatoid arthritis; systemic lupus erythematosus; tetanus toxin.
                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antigenic peptide from the CDR2 domain of CD4, for immunization
                                                                                                      ;
                                                            Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 74; DB 3; Length 17; Pred. No. 1.1e-06;
                                                                                                 Indels
                                                     100.0%; Score 74; DB 3; L llarity 100.0%; Pred. No. 1.1e-06; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                         T helper cell (Th) epitope of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                against e.g. human immune deficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 11; Page 65; 106pp; English.
                                                                                                                                                                                                                                                                                          AAY54539 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
100.0%;
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                                                                                                                                                                                      3 OYIKANSKFIGITEL 17
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                                                                                                                                              1 OYIKANSKFIGITEL
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                                                                           Local Similarity
les 15; Conserv
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani
               Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 17 AA;
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                                                                                                                                                                                                                                                                                                                                       AAY54539;
                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wang CY;
                                                                                                 Matches
                                                                                                                                                                                                                                                  RESULT 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New
                                                                                                                                                                                                                                                                           AAY54539
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o O

Beta-amyloid precursor protein; APP; chimeric peptide; B cell epitope; vaccine; T helper cell epitope.

Clostridium tetani.

WO200142306-A2.

14-JUN-2001.

Amino acid sequence of T helper cell epitope of tetanus toxin.

(first entry)

22-AUG-2001

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Glutamic acid; glutamine; vaccine; major histocompatibility complex; MHC; fimunomodulator; antiallergic; endocrine; neuroprotectant; virucidal; bactericidal; antiparasitic; fungicidal; cytostatic; medicine; pharmaceutical; immune disorder; immune deficiency; autoimmune; yppersensitivity, allergy; graft rejection; infection; hormonal disorder; central nervous system disease; cancer; melanoma; anti-melanoma vaccine; human immunodeficiency virus.
                                                                                                                                                                                                                                                                                                                                 Stabilized pharmaceutical containing N-terminal glutamic acid or glutamine, useful e.g. in anti-melanoma vaccines, is an addition salt with strong acid.
                                                                                                                                                                                                                                                                                       Goetsch L;
                               Vaccine related MHC ligand peptide SEQ ID NO:619.
                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes a pharmaceutical
                                                                                                                                                                                                                                                                                       Beck A,
                                                                                                                                                                                                                                                                SA PIERRE.
                                                                                                                                                                                                                                                                                                                                                                               Claim 9; Page 136; 149pp; French.
                                                                                                                                                                                                                                                                                       Corvaia N,
                                                                                                                                                                                                                                        23-MAR-2000; 2000FR-00003711.
                                                                                                                                                                                                                  22-MAR-2001; 2001WO-FR000872
         (first entry)
                                                                                                                                                                                                                                                               (FABR ) FABRE MEDICAMENT
                                                                                                                                                                                                                                                                                                            WPI; 2001-611470/70.
                                                                                                                                                                                                                                                                                     Klinguer-Hamour C,
                                                                                                                                               Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 17 AA;
                                                                                                                                                                     WO200170772-A2
                                                                                                                                                                                            27-SEP-2001
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Novel chimeric peptide containing N- or C-terminal end-specific B cell epitope from naturally occurring internal peptide cleavage product (such as beta amyloid peptide) of a precursor protein, joined to T cell

Claim 8; Page 43; 47pp; English.

(MIND-) MINDSET BIOPHARMACEUTICALS USA INC

WPI; 2001-381648/40.

Chain B;

38-DEC-2000; 2000WO-US033203.

38-DEC-1999;

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The present sequence represents a T helper cell epitope, which is used to create chimeric peptides of the invention. The chimeric peptides contain a N- or C-terminal end-specific B cell apitope from a naturally occurring internal peptide cleavage product of a precursor or mature protein, as a free N- or C-terminus, joined to a T cell epitope, with or without a spacer amino acid residue. Chimeric peptides comprising beta-amyloid precursor protein (APP) peptides slow down, reduce or prevent the accumulation of amyloid beta peptide in the extracellular space, interstitial fluid and cerebrospinal fluid of the brain, and aggregation interstitial fluid and cerebrospinal fluid of the brain, and aggregation of amyloid beta peptides or plaques. They also block the interaction of amyloid beta. The chimeric peptides are useful for neurotoxicity of amyloid beta. The chimeric peptides are useful for immunising humans againet the free N- or C-terminus of an internal self peptide cleavage product (e.g. APP peptide) derived from a precursor protein or a mature protein. The internal peptide cleavage product is the self molecule of the mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB30941
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the form of an addition salt with a strong, physiologically acceptable contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in the form of an addition salt with a strong, physiologically acceptable acid (II). Also described are: (a) a pharmaceutical composition containing at least one (I); (b) a vaccine containing at least one (I) where this is a major histocompatibility complex (MHC) ligand (Ia); (c) a method for in vitro diagnosis of diseases associated with the presence of (Ia); (d) a kit for method (c) that includes a (Ia); and (e) a process for preparing (I). (I) has immunomodulator, endocrine, antiallargic, neuroprotectant, virucidal, bactericidal, antiparasitic, fungicidal and cytostatic activities. (I) are useful, in human or veterinary medicine, in pharmaceutical compositions (for treating immune discretes, e.g. immune deficiency, autoimmune states, hypersensitivity, allergy, graft rejection, infection, hormonal disorders and central nervous system diseases), also, where (I) is a MHC ligand (Ia), in vaccines for treatment or prevention of: (i) viral, bacterial, parasitic or fungal infections; or (ii) of cancers. A particular application is in antifications; or (ii) of sancers. A particular application is in antimelanoma vaccines. (I) are also useful for in vitro diagnosis of diseases associated with interactions between MHC and (I), e.g. melanoma and human immunodeficiency virus infection. AAM98898 to AAM99592 represent invention methods in pharmaceutical compounds from the present invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 compound (I) that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 4; I 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 OYIKANSKFIGITEL
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AAB84435 standard; peptide; 17 AA.

RESULT 66 AAB84435

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AAB84435

Query Match

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                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amino acid sequence of peptide derived from tetanus protein.
                                                   100.0%; Score 74; DB 4; Length 17; 100.0%; Pred. No. 1.1e-06;
                                                                                                      0; Indels
                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                       AAB30941 standard; peptide; 17 AA.
                                                                                                                                                         1 OYIKANSKFIGITEL 15
                                                                                                                                                                                              OYIKANSKFIGITEL 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                         Conservative
                                                                               Local Similarity
Sequence 17 AA;
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Ferries

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The present sequence represents an antigenic fragment of tetanus protein, which is included in vaccines of the invention. The specification describes polyepitopic fragments from the Nef protein of human immune deficiency virus (HIV). The Nef peptides bind stably to human leukocyte antigen (HLA) type molecules. The Nef peptides induce a specific immune response. Particularly, they induce cytolysis, by cytotoxic T cells (CTL), of cells that express Nef associated with appropriate HLA molecules and induce secretion of cytokines (particularly interleukin (IL)-2 and IL)-4, and gamma-interferon by these CTL. The Nef peptides, their derivatives, nucleic acids encoding them and specific antibodies are used, in compositions or vaccines, to treat or prevent diseases specifically acquired immunodeficiency with with immunodeficiency syndrome. The antibodies are also useful for in vitro diagnosis of these diseases
                                                                                                                                                                                   New polyepitopic fragments from Nef protein of the human immune deficiency virus, useful for treatment or pravention of acquired immune deficiency syndrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vecanus toxin; T cell epitope; CD8 response; Thi type immune response; Thi CD4-specific T lymphocyte; infection; cytotoxic T lymphocyte; CTL; antiretroviral therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
100.0%; Score 74; DB 4; Length 17;
Best Local Similarity 100.0%; Pred. No. 1.1e-06;
Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                   Connan F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CNRS ) CNRS CENT NAT RECH SCI.
(INSP ) INST PASTEUR LILLE.
(INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
                              (BIOV-) BIOVECTOR THERAPEUTICS SA. (INRM ) INSERM INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amino acid residues 830-846 of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'note= "acetylated residue"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "-CONH2 attached"
                                                                                                   Guillet JG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAG62904 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                 Disclosure; Page 6; 24pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-DEC-2000; 2000WO-FR003708
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                                                                                                Bourgault VI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-SEP-2001 · (first entry)
                                                                                                                                           WPI; 2001-064174/08.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17 AA;
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Modified-site
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                                                                                                   Choppin J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAG62904;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 69
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         셤
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence is derived from a tetanus protein, and is included in vaccines of the invention. The specification describes polyepitopic fragments from the BG and E7 proteins of human papilloma virus (HPV). The HPV peptides include CD4 epitopes recognised by T helper cells. They bind stably to human leukocyte antigen (HLA) type molecules. The HPV peptides induce a specific immune response, particularly cytolysis, caused by cytotoxic T cells (CTL). They also induce secretion of cytokines cytotoxic T cells (CTL). They also induce secretion of cytokines cytotoxic antibodies are used, in compositions or vaccines, to treat or prevent diseases associated with HPV infection, e.g. cervical or vulvar intraepithelial neoplasia and invasive cancer of the cervix uteri. The antibodies are also useful for in vitro diagnosis of these diseases
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                                                                                                                                                                                                                                                                                                                                                                                                                                      New polyepitopic fragments from human papilloma virus E6 and E7 proteins, useful for treatment or prevention of e.g. cervical neoplasia and cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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0
                                                                                                                                                                                                                                                                                                                                                 Ferries E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 4; Length 17; 100.0%; Pred. No. 1.1e-06; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                              Connan F,
                                                                                                                                                                                                                                                                        (BIOV-) BIOVECTOR THERAPEUTICS SA.
(INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
                                                                                                                                                                                                                                                                                                                                              Guillet JG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antigenic fragment of tetanus protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 12; 27pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB31029 standard; peptide; 17 AA.
vulvar intraepithelial neoplasia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99FR-00007012.
                                                                                                                                                                                   99FR-00012511.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-064175/08.
                                               Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani,
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                                                                                                                                                                                07-OCT-1999;
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                                                                                           FR2794371-A1
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RESULT 68 AAB31029

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Gaps

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The present sequence represents a peptide, comprising residues 830-846 of tetanus toxin. The peptide is a T cell epitope. The peptide induces a Thi 194-specific T lymphocyte cell line. To produce the cell lines, CD4+T cells are isolated from a donor sample, and are subjected to in vitro immunisation with T cell epitopes, in the presence of dendritic cells. The cell lines of the invention induce cytotoxic T lymphocytes (CTb), i.e. a CD8 response, against infectious agents such as viruses, bacteria and parasites. The cell lines are used to prevent or treat infections caused by viruses, bacteria and parasites, specifically human immune deficiency virus (HIV), especially in combination with highly active antiretroviral therapy, to restore the Thi response. Treatment with the composition
                                                                                                                                                                                                                                                                                                                                                                            causes a marked and rapid reduction in viremia but does not eradicate the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Solid supports for the synthesis of compounds having an alpha-oxo-aldehyde group and peptides, made by solid phase synthesis using such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Solid supports; alpha-oxoaldehyde group; glyoxylic acid derivative; vaccine; macromolecule; microtitration plate.
                                                                                            CD4-specific T lymphocytes of Th1 type, useful in immunotherapy infections, specifically by human immunodeficiency virus.
                                Auriault
                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 74; DB 4; Length 17; 100.0%; Pred. No. 1.1e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide 5 for peptides containing alpha-oxoaldehyde group.
                              Gras-Masse H, Bouzidi A, Hachulla E,
(SEDA-) SEDAC SOC ETUD & DEV ANTIGENES COMBINATO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Acylated N-terminus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gras MH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bourel L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB15589 standard; peptide; 17 AA.
                                                                                                                                                Example 3; Page 13; 18pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (INSP ) INST PASTEUR LILLE.
(CNRS ) CNRS CENT NAT RECH SCI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-MAR-2001, (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fruchart JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-094357/11.
                                                                WPI; 2001-441868/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Melnyx O,
                                Pancre V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB15589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 70
AAB15589
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Gaps

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                                                                  The invention relates to solid supports, functionalized for the synthesis of compounds having an alpha-oxo-aldehyde group, a process for the synthesis of such compounds. The invention also covers peptides having an alpha-oxoaldehyde group situated in a position other than a N-terminal extremity and not being linked through amide to an amine on a side chain of lysine or ornithine, prepared using a support of the invention. This sequence represents an example of a peptide used in the method of the invention. Solid phase synthesis of alpha-oxoaldehyde peptides and other organic molecules such as non-peptidic derivatives of glyoxylic acid. Such products are themselves useful in the pharmaceutical industry for synthetic vaccines, synthesis of macromolecules, and microtitration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to a novel peptide immunogen comprising a helper T cell (Th) epitope, an N-terminal fragment of amyloid beta habeta peptide (residues 1-42) linked to the epitope and optionally a spacer consisting of at least an amino acid to separate the immunogenic domains. Sequences of the invention are useful for preventing or treating Alzheimer's disease (AD) in a mammal, to produce antibodies to Abeta peptide that is cross-reactive to soluble Abeta peptides and brain tissue plaques formed from it. They are useful for aliciting a site-directed mutagenesis against the main functional/regulatory site of the Abeta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel peptide immunogen comprising a helper T cell epitope, an N-terminal fragment of amyloid beta peptide linked to the epitope, and optionally a spacer, useful for preventing or treating Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunogen, helper T cell, Th epitope, amyloid beta, Alzheimer's disease, Abeta, AD; brain tissue plaque; immunoneutralisation, neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                 Length 17;
                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 4; Length 17
100.0%; Pred. No. 1.1e-06;
iive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium tetani T helper cell epitope #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAE35609 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 36; 77pp; English.
                                   Example 4; Fig 3; 86pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UNBI-) UNITED BIOMEDICAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-MAY-2001; 2001US-00865294.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-APR-2002; 2002WO-US010293.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                        Query Match

Query Match

Best Local Similarity 100.vv

Best Local Similarity 100.vv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vaccine; nootropic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                       Sequence 17 AA;
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  supports.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang CY;
                                                                                                                                                                                                                                                                                                      plates
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peptide and for generating antibodies, which are highly cross-reactive to the soluble Abeta peptide and the amyloid plaques formed in the brain of Alzheimer's disease patients. The sequences are useful for induction of accelerated clearance of amyloid plaques and immunoneutralisation of the soluble Abeta derived toxins in the brain to prevent and treat Alzheimer's disease. They are also useful as vaccines. The present sequence is Clostridium tetani T helper (Th) cell epitope used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Diagnosing Type-1 diabetes, by contacting patient sample comprising T-cells with proinsulin peptide and detecting the ability of peptide to stimulate T-cells by measuring ability of T-cells to proliferate or
                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   preproinsulin; type I diabetes; T-cell; proinsulin peptide; cytokine;
                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                   Length 17;
                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                 100.0%; Score 74; DB 6; I 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 3; Col 25-26; 27pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     blood of type I diabetic patients.
                                                                                                                                                                                                                                                                                                                                                                                          ADA09238 standard; peptide; 17 AA
                                                                                                                              exemplification of the invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95US-00472701.
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                                                                                                                                                                                                                                                                                                    OYIKANSKFIGITEL 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (DART-) DARTMOUTH COLLEGE
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                   1 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hickey WF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxoid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-595984/56.
                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       produce cytokines.
                                                                                                                                                             Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US6509165-B1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Griffin AC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   insulitis.
                                                                                                                                                                                                                                                                                                                                                                                                                              ADA09238;
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The invention relates to a novel peptide represented by formula (1) given below. The new peptide is represented by formula (1): (A) n - (Th) m - (B) o -Abeta (4-10) - (C) p where each of A, B and C are an amino acid residue or sequence of amino acid residues; n, o or p = 0-20, when o is 0 then The is directly connected to the B cell epitope Abeta (4-10) through a peptide bond without any spacer residue; Th is a sequence of amino acid residues that comprises a helper T cell epitope or its immune enhancing analogue or segment; m = 0-5; Abeta (4-10) is Pho-Arg-His-Asp-Ser-Gly-Tyr (ADM80621) or its analogue containing a conservative substitution. A peptide of the invention has neuroprotective and nootropic activity. The peptide is useful in preparing a composition for treating Alabeimer's disease. Specifically, the methods are useful for reducing the amount of amyloid deposits in the brain of an individual afflicted with Alzheimer's disease, disaggregating the amyloid fibrils in the brain of an individual can inhibitor of amyloid deposition and fibril formation. The present inhibitor represents a helper T cell epitope peptide of the invention.
                                                                                                                                                                                                                                                                                 amyloid beta, Abeta(4-10); helper T cell epitope, neuroprotective;
nootropic; Alzheimer's disease; amyloid deposit; brain; amyloid fibril.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New immunogenic peptide Abeta(4-10), useful in preparing a composition for treating Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 100.0%; Score 74; DB 7; Length 17; Similarity 100.0%; Pred. No. 1.1e-06; 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                             Human helper T cell epitope peptide SEQ ID NO:5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UTOR ) UNIV TORONTO GOVERNING COUNCIL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 2; SEQ ID NO 5; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mclauring J;
                                                                                                                              ADM80624 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADG74074 standard; peptide; 17 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-APR-2003; 2003WO-CA000502.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-APR-2002; 2002US-0373914P.
OYIKANSKFIGITEL 15
                     OYIKANSKFIGITEL 17
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                                                                                                                                                                                                         (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       St George- Hyslop P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-903280/82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                            WO2003089460-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17 AA;
                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                       03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                 30-OCT-2003
                                                                                                                                                                    ADM80624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 74
ADG74074
ID ADG74
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                                                                                           RESULT 73
                                                                                                              ADM80624
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Gaps °,

0; Indels

Length 17;

100.0%; Score 74; DB 6; 1 100.0%; Pred. No. 1.1e-06;

0; Mismatches

Local Similarity 100. 16s 15; Conservative

Query Match Best Loca Matches

WO2003103605-A2.

18-DEC-2003

11-MAR-2004

ADG74074;

Mccormick AA,

Pogue GP

intermediates

tobacco

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The invention describes a method of detecting an indicator (I) of type I diabetes in a subject. The method comprises obtaining a biological sample from the subject, contacting the sample with a proinsulin peptide compound (II) which stimulates an immunological response by T cells of type I diabetic subjects and detecting an immunological activity in the sample against (II) in the subject. The method is useful for detecting an indicator of type I diabetes in a subject. Also described is a method is useful for inhibiting the development or progression of type I diabetes in a subject. This is the amino acid sequence of a tetanus toxoid peptide associated with the study of proinsulin peptide reactive T cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Detecting indicator of type I diabetes in subject, by contacting sample with proinsulin peptide compound stimulating immunological response, detecting immunological activity in sample against proinsulin peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Micelle, microaggregate; induction; immune response; lipopeptide; cytotoxic T-lymphocyte; epitope; lipid; helper T-lymphocyte; HTL; tetanus; toxin; vaccine; HIV; hepatitis B virus; papilloma virus; melanoma; Plasmodium falciparum; malaria.
                                                                                                        antidiabetic; immunosuppressive; type I diabetes; proinsulin; immunological response; T cell; preproinsulin; tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 74; DB 8; Length 17; 100.0%; Pred. No. 1.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HIV-derived lipopeptide epitope TT for mixed micelles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 3; SEQ ID NO 23; 27pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY26607 standard; peptide; 18 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human immunodeficiency virus 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                             95US-00472701.
                                                                                                                                                                                                                                                                                                                                                              17-DEC-2002; 2002US-00321717
                                                                                                                                                                                                                                                                                                                                                                                                                   94US-00272220
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (DART-) DARTMOUTH COLLEGE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Griffin AC, Hickey WF;
                                                 Tetanus toxoid peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-178909/17.
                                                                                                                                                                                         Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                             US2004002113-A1.
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20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                   08-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                             06-JUN-1995;
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                                                                                                                                                                                                                                                                                                    01-JAN-2004.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY26607;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention provides a method for generating virus-like particle (VLP)
vaccines in an adaptable, predictable, stable and scaleable manner.
Methods are provided for making vaccines made of re-assembled VLPs.
Chemical conjugation of unique peptide or nucleic acid moietries to form chemical conjugation of unique peptide or nucleic acid moietries to form caparate populations. A predetermined amount of each of the several (one or more) different encapsidation intermediates from the different correct or more) different encapsidation intermediates from the different correct or more) different encapsidation intermediates from the different correct or more) different encapsidation intermediates such that the reassembled VLP displays more than one peptide or nucleic acid. The nucleic acid can function as a scaffold and intermediates such that the reassembled VLP displays more than one peptide or nucleic acid. The nucleic acid can function as a scaffold and can also be engineered to express an immunomodulatory protein in a cukaryotic cell. The VLP is useful as a vaccine against viral or bacterial pathogens, an anti-allergy medication, and a diagnostic reagent or combinatorial chemistry reagent (all claimed). Tobacco mosaic virus (TWV) was used as VLP carrier in examples from the invention, in which epitope sequences were fused in-frame to the TWV U1 coat protein. TWV (MDN or assembled) in vitro decorated with a single epitope (multivalent). The present sequence is that of testanus toxoid immunostimulatory poptide, or a far an analyse from the invention in the protein and a soluble from the invention or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or an entermediate or entermediate or entermediate or entermediate or entermediate or 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lergy medication or a diagnostic reagent, comprises disassembling a bacco mosaic virus and forming intact VLP of one or more encapsidation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                     Tetanus immunostimulatory epitope P2 TT 830-846
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; SEQ ID NO 14; 86pp; English.
                                                                                                                                                            Epitope; virus-like particle; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith ML, Palmer KE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADJ25950 standard; peptide; 17 AA.
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                                                 (first entry)
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nes 15; Conservative
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                                                                                                                                                                                                                Clostridium tetani
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Gaps

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HBV; p53;

Sequence 17 AA;

Query Match

Best Loca Matches

ð g 04-JUN-1999

ADJ25950

SXXX

RESULT 75 ADJ25950 us-09-806-703a-12.rag

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The specification describes a process for binding a peptide to a hydrazone, in solution. The lipophile is non-peptidic and is of a formula given in the specification. The lipid-peptide bond is stable and the process is simpler to carry out than known methods, being in solution with a totally deprotected peptide. The method is used for call screening and targeting of hormones and neuropeptides through physiological barriers e.g. call membranes. The present peptide is functionalised by alpha-hydrazinoacetyl groups, and is used in the course of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to a new pharmaceutical composition comprising a unit dose form of a peptide, or analogue, comprising an epitope selected from those represented by peptides AAY98812-Y99339 which are derived from various antigens for various human leucocyte antigen class DR molecules, representative of the world wide population. The peptide/analogue binds to an HLA class II molecule at an IC-50 of less
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New compositions containing immunogenic peptide epitopes for various HLA class II DR molecules useful for inducing helper T cell response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human leucocyte antigen; HLA class II; antigen epitope; pharmaceutical; immune response; chronic viral disease; cancer; autoimmune disease; rheumatoid arthritis; multiple sclerosis; myasthenia gravis; AIDS; allograft rejection; allergy; lyme disease; hepatitis; prostate cancer; glomerulonephritis; food hypersensitivity; malaria.
                                                                             Peptides linked to lipophilic aldehyde vectors enable hormones and neuropeptides to pass through physiological barriers.
                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 5; Length 18; 100.0%; Pred. No. 1.2e-06; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HLA class II binding antigen epitope peptide #244.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY99055 standard; peptide; 19 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 44; 60pp; English.
Melnyk O;
                                                                                                                                             Example; Page 16; 56pp; French.
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Bourel L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (EPIM-) EPIMMUNE INC
                                  WPI; 2002-329866/36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                           Sequence 18 AA;
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Bonnet D,
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                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to the generation of mixed micelles or microaggregates for inducing an immune response comprise: (a) a first lipopeptiale comprising at least one CTL (cytotoxic T-lymphocyte) epitope and at least one lipid unit, and (b) a second lipopeptiale comprising at least one HTL (helper T-lymphocyte) epitope and at least one lipid unit different from that of the first lipopeptide. This peptide represents an example of a lipopeptide epitope used in the invention and is derived from HIV-1. The immunogenic lipopeptide micelles are used in vaccines, especially against HIV, hepatitis B virus (HBV), papilloma viruses, p53, melanoma or Plasmodium falciparum malaria
                                                                                                                                                                                                                                                                                Immunogenic lipopeptide micelles - comprising lipopeptides containing cytotoxic and helper T\textsubscript e epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "COCH2NHNH2 attached to amidated residue"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lipophilic vector; aldehyde; hydrazone; cell screening; hormone targeting; neuropeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 2; I 100.0%; Pred. No. 1.2e-06;
                                                                                                                                                                                  Wieruszeski JM,
                                                                                              (INRM ) INSERM INST NAT SANTE & RECH MEDICALE
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                                                                                                                                                                             Gras MH, Bossus M, Lippens G, Guillet JG, Bourgault VI;
                                                                                                                                                                                                                                                                                                                                              Claim 11; Page 47; 60pp; French
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CENT NAT RECH SCI
                                                                                                                 CNRS CENT NAT RECH SCI
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               97FR-00015246
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Best Local Similarity
'...hes 15; Conserve
                                                                                                                                                                                                                                            WPI; 1999-349509/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seguence 18 AA;
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Modified-site
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            03-DEC-1997;
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(CNRS ) CNRS
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RESULT 77 ABB09794

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Gaps

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us-09-806-703a-12.rag

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than or equal to 1,000 nM. The pharmaceutical can be used to induce a helper T cell response. The pharmaceutical focuses the immune response covards selected determinants and could therefore be used in cases of chical diseases and cancer. Examples of diseases that can be tracted using the peptide containing pharmaceutical include autoimmune diseases (rheumatoid arthritis, multiple sclerosis, and myssthenia gravis), allograft rejection, allergies, lyme disease, hepatitis, poststreptococcal endocarditis or glomerulonephritis and food streptococcal endocarditis or glomerulonephritis and food streptococcal endocarditis or glomerulonephritis and food responses against other immunogens administered with the peptides. Diseases which can be treated using immunogenic mixtures include prostate cancer, hepatitis B, hepatitis C, AIDS, renal carcinom, carvical carcinom, lymphoma, and condyloma acuminatum. The peptides may also be used to make monoclonal antibodies useful as potential diagnostic or therapeutic agents. The peptides may also be useful as diagnostic or therapeutic grammine the susceptibility of an individual condyloma the susceptibility of an individual condyloma the susceptibility of an individual condyloma the susceptibility of an individual condyloma the selection of appropriate T and B cell epitopes should allow the development of epitope based vaccines particularly towards conserved conse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              variability such as HIV, HCV and Malaria
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Sequence 19 AA;

Gaps ö 100.0%; Score 74; DB 3; Length 19; 100.0%; Pred. No. 1.2e-06; ive 0; Mismatches 0; Indels 1 QYIKANSKFIGITEL 15 3 QYIKANSKFIGITEL 17 Query Match
Best Local Similarity 100. ò 셤

AAM99517 standard; peptide; 19 AA 07-DEC-2001. (first entry) AAM99517; RESULT 79 AAM99517

Vaccine related MHC ligand peptide SEQ ID NO:620.

Glutamic acid; glutamine; vaccine; major histocompatibility complex; MHC; immunomodulator; antiallergic; endocrine; neuroprotectant; virucidal; bactericidal; antiparasitic; fungicidal; cytostatic; medicine; pharmaceutical; immune disorder; immune deficiency; autoimmune; hypersensitivity; allergy; graft rejection; infection; hormonal disorder; central nervous system disease; cancer; melanoma; anti-melanoma vaccine; human immunodeficiency virus.

WO200170772-A2.

27-SEP-2001

22-MAR-2001; 2001WO-FR000872.

23-MAR-2000; 2000FR-00003711.

Goetsch L; Klinguer-Hamour C, Corvaia N, Beck A,

(FABR) FABRE MEDICAMENT SA PIERRE.

WPI; 2001-611470/70.

Stabilized pharmaceutical containing N-terminal glutamic acid or glutamine, useful e.g. in anti-melanoma vaccines, is an addition salt with strong acid.

Claim 9; Page 136; 149pp; French.

The present invention describes a pharmaceutical compound (I) that contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in the form of an addition salt with a strong, physiologically acceptable acid (II). Also described are: (a) a pharmaceutical composition acid (II). Also described are: (a) a pharmaceutical composition containing at least one (I); (b) a vaccine containing at least one (I) where this is a major histocompatibility complex (MFIC) ligand (Ia); (c) a method for in vitro diagnosis of diseases associated with the presence of (Ia); (d) a kit for method (c) that includes a (Ia); and (e) a process of propering (I). (I) has immunomedulator, endocrine, antiallargic, controprotectant, virucidal, bactericidal, antiparasitic, fungicidal and cytostatic activities. (I) are useful, in human or veterinary medicine, contingual contingual contingual and contrain infection, autoimmune states, hypersensitivity, allergy, graft rejection, infection, hormonal disorders and central nervous system creament or prevention of: (I) viral, bacterial, parasitic or fungal infections; or (ii) of cancers. A particular application is in antimalannoma vaccines. (I) are also useful for in vitro diagnosis of diseases associated with interactions between MHC and (I), e.g. melanoma and human immunodeficiency virus infection. AMM98989 to AMM98952 represent invention cumunodeficiency virus infection. Compounds from the present invention

Sequence 19 AA;

ô Gaps ö 100.0%; Score 74; DB 4; Length 19; 100.0%; Pred. No. 1.2e-06; 0; Indels 0; Mismatches Query Match
Best Local Similarity 100.
Matches 15, Conservative

1 QYIKANSKFIGITEL 15

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ADH09986 standard; peptide; 20 AA. 11-MAR-2004 ADH09986; RESULT 80 ADH09986

(first entry)

Modified tetanus toxoid T-helper epitope.

Maleimide cluster; multivalent peptide; multivalent protein; peptide synthesis; vaccination; peptide drug delivery; drug targeting; protein folding; cholic acid core; tetanus toxoid; T-helper epitope.

Synthetic. Clostridium tetani.

20 /note= "C-terminal amide" WO2004000802-A2. Key Modified-site

Location/Qualifiers

20-JUN-2003; 2003WO-US019779. 20-JUN-2002; 2002US-0390776P.

31-DEC-2003.

(UYMA-) UNIV MARYLAND BIOTECHNOLOGY INST.

Singh S; Wang L, Ni J, Li H,

WPI; 2004-156401/15.

Maleimide cluster comprising core molecule, carbohydrate core, cholic acid core, useful as template for assembling multivalent peptide.

Example 9; Fig 10; 63pp; English

The invention relates to a maleimide cluster for multivalent peptide synthesis. The maleimide cluster can comprise a core to which five or more maleimides are each attached via a linker, or it can comprise a carbohydrate or cholic acid core to which two or more maleimides are eached attached via a linker. The invention also relates to a multivalent peptide or protein comprising a maleimide cluster with identical or different peptides or proteins covalently attached to the maleimide, production of a multivalent peptide or protein; methods of vaccination, peptide drug delivery or drug targeting using the maleimide cluster; and methods of raising polyclonal or monoclonal antibodies using the maleimide cluster; and maleimide cluster. The maleimide cluster is useful as a template for the assembly of multivalent peptides. These may be used in vaccination, for peptide drug delivery or for studying protein folding. A targeting protein may also be attached to maleimide clusters to facilitate the targeting of a compound to specific cells or organelles. The present cargeting of a compound to specific cells or organelles. The present maleimide cluster in an example of the invention. ö Gaps ö Score 74; DB 8; Length 20; Pred. No. 1.3e-06; Mismatches 0; Indels AAB46196 standard; peptide; 22 AA. ; 100.08; 100.08; 20 1 QYIKANSKFIGITEL 15 04-APR-2001 (first entry) Best_Local Similarity 100. Matches 15; Conservative QYIKANSKFIGITEL Sequence 20 AA; AAB46196; Query Match 엄 ò

Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease. Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific Yednock T, Tetanus toxoid epitope fusion construct #16. Bard F, Vasquez NJ, 26-MAY-2000; 2000WO-US014810 99US-00322289 (NEUR-) NEURALAB LTD. WPI; 2001-032104/04. Clostridium tetani WO200072880-A2. 28-MAY-1999; 07-DEC-2000. Schenk DB, RESULT 81 AAB46196

This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent

Disclosure; Page 32; 143pp; English.

antibody

ö ö This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to abbeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreceptor mediated phagocytosis) against it (b) a polypeptide containing an N-terninal segment of at least residues 1-5 of Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of trearment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease. Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody. Gaps Gaps ö ; 0 ch 100.0%; Score 74; DB 4; Length 22; 1 Similarity 100.0%; Pred. No. 1.4e-06; 15; Conservative 0; Mismatches 0; Indels 100.0%; Score 74; DB 4; Length 22; 100.0%; Pred. No. 1.4e-06; 0; Indels Mismatches Yednock toxoid 830-844 epitope AN90549. Disclosure; Page 31; 143pp; English. AAB46175 standard; peptide; 22 AA. Vasquez NJ, 100.08; Fr. 26-MAY-2000; 2000WO-US014810. 22 1 QYIKANSKFIGITEL 15 (first entry) Query Match 100. Best Local Similarity 100. Matches 15; Conservative OYIKANSKFIGITEL (NEUR-) NEURALAB LTD Schenk DB, Bard F, WPI; 2001-032104/04. Alzheimer's disease Query Match Best Local Similarity Matches 15; Conserv Clostridium tetani. Sequence 22 AA; Sequence 22 AA; WO200072880-A2 28-MAY-1999; 04-APR-2001 07-DEC-2000 AAB46175; Tetanus RESULT 82 AAB46175 셤 à

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RESULT 83

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This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Fc receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease
                                                                                Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
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                                      Human APP A-beta 1-12 peptide fragment #1.
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Parkinson's disease.
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Best Local Similarity
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                                                                                                                                                                      Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises antibody bacta fragments in the brain of a patient, which comprises antibody binds to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreceptor mediated phagocytosis) against it (b) a polypeptide containing that induces an immunogenic response gainst residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invantion have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-032104/04.
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Query Match Best Loc Matches

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immungenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
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                                                                  or treating disease such as Parkinson's disease characterized
                                                                                         Lewy bodies or alpha-synuclein aggregation in brain by administering ant that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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                                                                                                                                                                                                                                                                                   Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Foreign epitope, P2; prostate specific membrane antigen; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
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                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                      Length 22;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haaning J,
                                                                                                                                                                                                                                                   100.0%; Score 74; DB 8; Lv
100.0%; Pred. No. 1.4e-06;
Mismatches 0;
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98US-0105011P
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/label= P2
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les 15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92650;
                                                                                                                                                                                                                                                                      Query Match
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                   associated with cancers (i.e. self-proteins), for example, heSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting shuultaneous presentation by antigen producing calls (APCs) of the animals immune system of: (1) at least 1 CTL (cyctoxic Tlymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope (e.g. P2 and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively
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immunogenic cell-associated peptide antigens (PA) such as those
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 25;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 3; I
100.0%; Pred. No. 1.7e-06;
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/label= P2
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15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 25 AA;
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Best Local &
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immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, hPSM, heregulin 2 (Her2) and/or fibroblast growth factors Bb (FGFBb). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cyctoxic Tlymphocyte) group derived from the PA and/or at least 1 E-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGFBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope (e.g. P2 and/or P30) are also claimed. The method is used to creat prostate/breast or breast cancer when the PA is human PSM, FGFBb and Her2, respectively
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                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 3; Length 25; 100.0%; Pred. No. 1.7e-06;
                                                                                                                                                                                                                                                                                                                     0; Indels
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                                                                                                                                                                                                                                                                                                                      0; Mismatches
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/label= P2
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nes 15; Conservative
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                                                                                                                                                                                                                                                   Sequence 25 AA;
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                                                                                                                                                                                                                                                                                     Query Match
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Matches
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immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (i.e. self-proteins), for example, hPSM, heregulin 2 (Herz) and/or fibroblast growth factors B0 (FGPBb). The method comprises effecting simultaneous presentation by antigen producing cells (APCB) of the animals immune system of: (1) at least 1 CTL (cytotoxic Tlymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and human/murine FGFBb comprising a substantial part of all known at least one foreign T helper epitope (e.g. Pz and/or P30) are also claimed. The method is used to treat prostate/presat or breast cancer when the PA is human PSM, FGFBb and Herz, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzehener's disease; type 2 diabetes; reactive system amyloidosis; ystemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated bara-2-mioroglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:28.
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                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 3; Length 25; 100.0%; Pred. No. 1.7e-06; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB49092 standard; protein; 25 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                           Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
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Chimeric.
                                                                                                                                                                                                                                                                                       Sequence 25 AA;
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27-MAR-2001
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Component. The inventor argo interaction to a marginal disorder which involves measuring a patient serum amount of immunoreactivity against a involves measuring a patient serum amount of immunoreactivity of at least cour times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders include Alzheimer's disease characterised by added variety of disorders include Alzheimer's disease characterised by amyloid beta peptide (labr) amylin) fibrils; reactive systemic amyloid beta peptide (labr) amylin) fibrils; reactive systemic amyloid associated with systemic inflammatory diseases (e.g., camyloidosis associated with systemic inflammatory diseases (e.g., cheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AATTR fibrils derived from serum amyloid A protein (ApoSSA); systemic senile amyloidosis and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform companient of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-
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component. The invention also relates to a method for determining the
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100.0%; Score 74; DB 4; Length 25;
Best Local Similarity 100.0%; Pred. No. 1.7e-06;
Matches 15; Conservative 0; Mismatches 0; Indels
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10-SEP-1995, (first entry)
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(WANG/) WANG C Y.
(ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 25; AA;
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stimulator is linked to apptide or protein hapten containing a cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes ond/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune response to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous computed and elicits and immune response to the coupled peptide in members of a heterogeneous sequence from the invasin protein of Yersinia. Spacer amino acid sequence from the invasin protein of Yersinia. Spacer amino acid comains and between the immune stimulators and hapten components. When the hapten components when the immune stimulators and hapten components. When the invasin domain can be omitted from the immune stimulator component. The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as above which can be used as a potent vaccine for treating e.g. prostatic hyperplatin, androgence and protein and protein carcinoma, prostatic arcinoma, testicular carcinoma, cancer, or for induction of infertility. This sequence is particularly preferred. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                              Synthetic immunogenic peptides are provided in which a universal immune
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                                   Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IgE CH4 region contg. peptide immunogen for treating allergies.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 74; DB 2; Length 27; 100.0%; Pred. No. 1.8e-06;
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                                                                                         Claim 8, 12; Page 84; 213pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UNBI-) UNITED BIOMEDICAL INC.
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94US-00328912.
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WPI; 1994-357910/44.
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25-OCT-1994;
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which
           AAR82592-R82600 and AAR83560-R83581 are peptide immunogens that are useful in vaccines for treating allergic reactions. In the immunogens, an IgE CH4 peptide is attached C-terminally to a series of amino acids including a helper T cell epitope. The immunogen may also opt. contain a fatty acid or fatty acid derivative, an invasin domain or alpha-NH2. The immunogen produces high titres of antibodies to the effector site in human IgE heavy chain (the CH4 domain peptide) which inhibit mast cell activation and reduce allergen-induced IgE prodn. The immunogens may be used in either a radially branching multimeric form or a linearly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:10.
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amyloid beta peptide; universal T-cell epitope; neuroprotective.
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                                                                                                                                                                                                                                                          100.0%; Score 74; DB 2; I
100.0%; Pred. No. 1.8e-06;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB49074 standard; peptide; 27 AA.
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(first entry)
                                                                                                                                                                                                                                                                                               15; Conservative
                                                                                                                                                                                 arranged monomeric form
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Best Local Similarity
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Chimeric.
                                                                                                                                                                                                                        Sequence 27 AA;
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27-MAR-2001
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cc involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The creating a pharmaceutical compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposits, type 2 diabetes characterised by sistem amyloid protein peptide (IAPP, amylin) fibrils, reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, ostcomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid A protein (ApoSSA); systemic senile creption arthritis ostcomyelitis, tuberculosis) characterised by ATTR cibrils derived from transthyretin (TTR); transmissible spongiform creption protein deposits, and beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; cramilial amyloid cardiomyopathy; transmissible spongiform encephalopathy; transmissible spongiform encephalopathy; haemodialyais-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 74; DB 4; L
Pred. No. 1.8e-06;
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nes 15; Conservative
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Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 27 AA;
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders include Alzheimer's disease characterised by adject the amyloid beta peptide fibril deposite; type 2 diabetes characterised by amyloidosis associated with systemic inflammatory diseases (e.g., amyloidosis associated with systemic inflammatory diseases (e.g., fibrils derived from serum amyloid A protein (AppSSA); systemic senile amyloidosis and familial amyloid Cardiomyopathy characterised by AACTE fibrils derived from transthyretin (TTR); transmissible spongiform coreption deposites, and beta-2-microglobulin deposite which form as a result of long term haemodialysis treatment. The present sequence corepheated to a universal T-cell epitope which may be used in a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-CC 2003 to standardise OS field)
                          Disclosure; Page 45; 140pp; English.
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Gaps ö Length 27; 100.0%; Score 74; DB 4; Length 27, 100.0%; Pred. No. 1.8e-06; Lidels 12 Local Similarity 100. 1es 15; Conservative 1 OYIKANSKFIGITEL Query Match Best Loca Matches ઠે 음

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ADD89947 standard; protein; 27 AA. 29-JAN-2004 (first entry) ADD89947; RESULT 96 ADD89947

LHRH peptide used in immunostimulant complex for prostate cancer vaccine. Immunostimulant; vaccine; human; immunogen; LHRH; immunotherapy;

prostate cancer.

Homo sapiens. Synthetic

WO2003068169-A2.

21-AUG-2003.

14-FEB-2003; 2003WO-US004711

14-FEB-2002; 2002US-00076674 31-JAN-2003; 2003US-00076674

(UNBI-) UNITED BIOMEDICAL INC.

Sokoll KK;

WPI; 2003-778890/73.

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                                                                                                                          The present sequence is that of a synthetic immunogenic peptide derived from human LHRH. This is an example of peptides that can be used in claimed immunostimulatory complexes of the invention that are specifically adapted to act as adjuvant and as peptide immunogen stabiliser. The complexes comprise a CpG oligonucleotide and a stabiliser. The complexes comprise a CpG oligonucleotide and a beloagically active peptide immunogen. The complex is particulate and can efficiently present peptide immunogen to the cells of the immune system to produce an immune response. The complexes may be prepared with various ratios of peptides to CpG oligonucleotides to provide different physical properties, such as the size of the microparticle. An immunostimulatory complex comprising the present LHRH derived peptide can be used in a vaccine for prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stabilized immunostimulatory complex useful for treating allergy, HIV infection or prostate cancer, comprising cationic peptide immunogen and anionic CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to an immunostimulatory complex specifically adapted to act as adjuvant and as a peptide immunogen stabiliser. The invention is useful for preparing a water-in-oil emulsion, suspension vaccine. It is also useful for treating prostate cancer, hormone ablation, allergy, HIV infection, foot-and-mouth disease, etc. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                Stabilized immunostimulating complex, useful for vaccination, e.g. against human immune deficiency viruses, comprises cationic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunostimulatory complex; adjuvant; peptide immunogen stabiliser; water-in-oil emulsion; suspension; vaccine; prostate cancer; hormone ablation; allergy; HIV infection; foot-and-mouth disease; therapy; human; antigen; LHRH.
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                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 74; DB 7; Length 27; 100.0%; Pred. No. 1.8e-06; Live 0; Mismatches 0; Indels
                                                      immunogen and anionic oligonucleotide.
                                                                                        Claim 17; SEQ ID NO 7; 159pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human LHRH immunogenic peptide #1.
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                                                                                                                                                                                                                                                                                                                                                                                      Sequence 27 AA;
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Local Similarity
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                                                                                                                                                                                                                               13-JUN-1996
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                                                                                                                                                                                                                                                                                                                                                                  24-MAR-1995;
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                                                                                                                                                                                                                                                                                                                                             05-OCT-1995.
                                                   Sequence 28
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                                                                                                                                                                                                                                                                                                      Synthetic.
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
 present sequence is human LHRH immunogenic peptide used in the invention.
                                                                                                                                                                                                                                       Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-call peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                            Gaps
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/note= "Gonadotrophin releasing hormone epitope"
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                                                                                                                                                                                                                                                                                                                                                                           'note= "Tetanus toxoid sequence (830-844 aa)"
                                       Length 27;
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                                        100.0%; Score 74; DB 8; I
100.0%; Pred. No. 1.8e-06;
                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 "Spacer peptide"
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                                                                                                                                                         AAU11422 standard; peptide; 28
                                                                                                                                                                                                                     Synthetic immunogen peptide 3.
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                                                                                 1 OYIKANSKFIGITEL 15
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                                                              Conservative
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                                                                                                                                                                                                                                                                                                       Clostridium tetani.
                                                  Local Similarity
les 15; Conserv
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                                                                                                                                                                                                 12-MAR-2002
                    Sequence 27
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                                                                                                                                                                                                                                                                                                                         Synthetic.
Chimeric.
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Matches
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endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IGE; CH4; immunoglobulin; epsilon; immunogen; helper T cell; epitope; vaccine; allergy; antibody; constant heavy chain.
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Pred. No. 1.9e-06;
; Mismatches 0;
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100.0%; Pred. No. 1.9e-06;
cive 0; Mismatches 0;
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94US-00328912.
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Best Local Similarity 100.
Matches 15, Conservative
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Clostridium tetani
Dermatophagoides
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                                                              WO200006694-A2
                                                                                                                          20-JUL-1999;
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                                                                                           10-FEB-2000
                                Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus and producing human immunodeficiency antibodies by in-vitro immunisation, which comprises: (a) separating peripheral mononuclear cells from blood using density gradient centrifugation; (b) treating the mononuclear cells with L-leucyl-L- leucine methyl ester; and (c) using the present antigen fragment, which is formed by coupled T and B cells, in a culture medium of human serum, IL-2 and T cells to effect cultivation and achieve in vitro immunisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Induction of neutralising human monoclonal antibodies against human immuno-deficiences - by sepg. peripheral mono:nuclear cells from blood using density gradient centrifugation, and treating cells by L-leucyl-L-leucine methyl ester etc.
                                                                                                                                                                        HIV; human immunodeficiency virus; immunisation; monoclonal antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a method of assessing human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiallergic, antiasthmatic; antiinflammatory; dermatological; immunosuppressive; vaccine; rhinitis; sinusitis; bronchial asthma; atoplc dermatitis; acute urticaria; chronic urticaria; gastro-intestinal syndrome; food allergen; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tetanus toxoid T cell epitope and Der pII B cell epitope peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T cell epitope; B cell epitope; allergy; allergen; antigenic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 2; Length 30; 100.0%; Pred. No. 2e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY82632 standard; peptide; 31 AA.
                                             AAR44398 standard; peptide; 30 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page; 36pp; Chinese.
                                                                                                                                                                                                                                                                                                  92TW-00103240
                                                                                                                                                                                                       Human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                92TW-00103240
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                                                                                                          (first entry)
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nes 15; Conservative
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                                                                                                                                       HIV antigen fragment
                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1993-335491/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 30 AA;
                                                                                                                                                                                                                                                                                                                                                               (CHIN/) CHIN
                                                                                                                                                                                                                                                                                                 24-APR-1992;
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                                                                                                          08-NOV-1994
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                                                                            AAR44398;
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                 RESULT 100
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                                  AAR4439
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The present invention describes a compound (I) for the prevention and/or treatment of allergy. The compound comprises at least one allergen antipolaric determinant (i) recognised by a B cell or an antibody secreted by a B cell of a non-atopic individual and at least one antibody secreted ceterminant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antiinflammatory.

Commander of the antial antial antiasthmatic, antiinflammatory.

Commander of the antial antial antial antial antial antial antial antial antial antial antial antial antial antial syndromes associated with the ingestion of cod allergens, oro-pharyngeal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or anixture of these. The use of (I) in the treatment of allergic conditions avoids the need for art drug therapies alleviate syndrome, but do not influence their causes, conveyer (I) actually combate the cause of an allergic reaction. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New compound for prevention and treatment of allergies comprises at least one allergen antigenic determinant recognized by a B cell and at least one antigenic determinant which does not trigger T cell activation.
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luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gapa
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                                                                                                                                                                                                                                                                                                                                                   98EP-00870167.
                                                                                                                                                                                                                                                                      99WO-BE000092.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saint-Remy J, Jacquemin M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
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Clostridium tetani
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WPI; 2000-422470/36.
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                                                                                         WO200006694-A2
                                                                                                                                                                               (UNIO ) UCB SA
                                                                                                                                    20-JUL-1999;
                                                                                                                                                          30-JUL-1998;
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                                                                                                               10-FEB-2000
                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADP02886;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present
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                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as lutelinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as useful as a contraceptive and in the treatment of diseases endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and immunogen is effective in eliciting high and immunogen is a synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                       Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                      /label= OTHER
/note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T cell epitope; B cell epitope; allergy; allergen; antigenic; antiallergic; antiasthmatic; antiinflammatory; dermatological; immunosuppressive; vaccine; rhinitis; sinusitis; bronchial asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tetanus toxoid T cell epitope and Der pII B cell epitope peptide.
                                                                 /note= "Gonadotrophin releasing hormone epitope"
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                                                                                                                                             /note= "Tetanus toxoid sequence (830-844 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 31;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 5; I 100.0%; Pred. No. 2.1e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                           11. .16
/note= "Spacer peptide"
                                              Location/Qualifiers
                                                                                                                                                                                                                                                                               Stevens VC;
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                                                                                                                                                                                                                                                                                                                                                                              Claim 11; Page 10; 43pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY82636 standard; peptide; 32
                                                                                                                                                                                                             04-MAY-2001; 2001WO-US014363,
                                                                                                                                                                                                                                   05-MAY-2000; 2000US-0202328P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immunogen of the invention
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                                                                                                                                                                                                                                                                              Michaeli D,
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                                                                                                                                                                                                                                                        (APHT-) APHTON CORP
                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 31 AA;
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                                                                                                                                                                                                                                                                                                                                                          or its analog.
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                                                                                                                                                                                        15-NOV-2001
Mammalia.
Synthetic.
Chimeric.
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                                                      Peptide
                                                                                                             Peptide
                                                                                                                                   Peptide
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Matches
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ID AAY8
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The present invention describes a compound (I) for the prevention and/or treatment of allergy. The compound comprises at least one allergen antication determinant (i) recognised by a B cell or an antibody secreted by a B cell of an non-atopic individual and at least one antication certains anticallergic, anticathmatic, antihinflammatory.

C determinant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antihinflammatory.

C dermatological and immunosuppressive activities, and can be used in a pharmaceutical or cosmetic medicament to treat and/or prevent allergies or a disease of allergic origin, benchial asthma, atopic dermatitis, some forms of acute and chronic urricaria, gastro-intestinal syndromes associated with the ingestion of cod allergens, oro-pharyngeal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or a mixture of these. The use of (I) in the treatment of allergic conditions avoids the need for drug treatment, which often causes undesirable side-effects. Also, prior art drug therapise alleviate symptoms, but do not influence thair causes, however (I) actually combats the cause of an allergic reaction. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New compound for prevention and treatment of allergies comprises at least one allergen antigenic determinant recognized by a B cell and at least one antigenic determinant which does not trigger T cell activation.
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atopic dermatitis; acute urticaria; chronic urticaria; gastro-intestinal syndrome; food allergen; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence represents a specifically claimed compound peptide
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                                                                                                                                                                               Dermatophagoides pteronyssinus.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98EP-00870167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saint-Remy J, Jacquemin M;
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us-09-806-703a-12.rag

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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequences (e.g. Gly-Gly) can be provided between the invasin acid sequences (e.g. Gly-Gly) can be provided between the invasin and The hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator and hapten components. When the hapten is simulator component sequence is an example of a cGr-Th-GG-invasin immune stimulator to which a hapten can be bonded. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                                                          Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 2; Length 37; 100.0%; Pred. No. 2.5e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Universal immunostimulator having GG spacers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
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                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 95; 213pp; English.
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                                                                                                        93US-00057166.
94US-00229275.
                                                                      94WO-US004832
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                     Zamb T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
Matches 15; Conservative
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/note= "t
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/note=
                                                                                                                                                                                                                                   Ladd AE, Wang CY,
                                                                                                                                                                                                                                                                         WPI; 1994-357910/44
                                                                                                                                                         (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tetanus toxin.
WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9425060-A1
                                                                      28-APR-1994;
                                                                                                        27-APR-1993;
14-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-2003
21-SEP-1995
                                  10-NOV-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR65383;
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Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclain and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-symuclain aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclain and/or Abeta to a patient, and the administration is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alpha-synuclain aggregation. This sequence corresponds to a linear fusion of the tetanus toxoid peptide corresponding to amino acid 830-844 and 947-967 used in the method of the invention.
                                                                                                                                                                                                                                                                                                                         Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö

    .19
    /note= "tetanus toxin helper T cell epitope"

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Universal immunostimulator having GG spacers.
                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 19; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22. .37
/note= "invasin domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR65389 standard; peptide; 37 AA.
                                                                                                                       31-OCT-2003; 2003WO-US034527.
                                                                                                                                                           01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                             (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                    Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (revised)
                                                                                                                                                                                                                                                                                        WPI; 2004-411388/38
               Clostridium tetani.
                                                 WO2004041067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-2003
21-SEP-1995
                                                                                     21-MAY-2004
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum immunoreactivity of at least control serviced amyloid component. A patient serum immunoreactivity of at least control serviced amyloid component. A patient serum immunoreactivity of a least compositions of the invention are useful for treating a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by anyloid arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid A protein (ApoSSA); systemic semile camyloid serum estum amyloid A protein (ApoSSA); systemic semile camyloid serum amyloid A protein (ApoSSA); systemic semile camyloid serum amyloid A protein (ApoSSA); systemic semile camyloid serum haemodialysis treatment. The present sequence concephalopathises (e.g., creutzfield-Jakob disease, kuru ) characterised by prion protein deposits, and beta-2-microglobulin deposits and maniform beta-2-microglobulin deposits and maniform beta-2-microglobulin deposits and maniform beta-2-microglobulin deposits and maniform beta-2-microglobulin deposits and maniform protein compesition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-CC 2003 to standardise OS field)
                                                                                                                                                                                                                              Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 4; Length 43; 100.0%; Pred. No. 3e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tetanus toxoid 830-844 + 947-967 epitope AN90542.
                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 45; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB46177 standard; peptide; 43 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; EL.
                     99US-0137010P
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                                                                       (NEUR-) NEURALAB LTD.
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Best Local Similarity
                                                                                                                                                                               WPI; 2001-070921/08.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 43 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200072880-A2
                     01-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB46177
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic I lymphocyte epitopes, giving a product which causes potent immune response to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HIA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequence from the invasin protein of Yersinia. Spacer amino acid sequence from the invasin protein of Yersinia spacer mino acid hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator to which a hapten can be bonded. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:12.
                                                                                                                                                                                                                                                                                                                                                    Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 2; Length 37; 100.0%; Pred. No. 2.5e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 95; 213pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB49076 standard; peptide; 43 AA.
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                94WO-US004832
                                                                 93US-00057166.
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                                                                                                                                                                                                                                                    Zamb T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
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nes 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
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Clostridium tetani.
                                                                                                                                                                                                                                                    Wang CY,
                                                                                                                                         (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #0200072876-A2
                28-APR-1994;
                                                               27-APR-1993;
14-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-SEP-2003
27-MAR-2001
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                                                                                                                                                                                                                                                    Ladd AE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 107
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Matches
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AAB49076

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28-MAY-1999;

Schenk DB,

antibody

07-DEC-2000

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic semile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                  Preventing or treating disease such as Parkinson's disease characterized
                                         by Lewy, bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 8; 100.0%; Pred. No. 3e-06;
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                                                                                                                                Disclosure; SEQ ID NO 35; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB49090 standard; protein; 44 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 43 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200072876-A2
                                                                                   beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schenk DB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB49090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                              disease associated without any local manufacturing of treatments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (FC receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The perchadic for prophylactic and therapeutic treatment of
                                                                                                                                                                                                                                                         Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                             This invention describes a novel method of preventing or treating a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fusion protein #14 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 4; Length 43; 100.0%; Pred. No. 3e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                       Yednock T;
                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 31; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADP02902 standard; peptide; 43 AA.
                                                                                                                                                                       Vasquez NJ,
                                     26-MAY-2000; 2000WO-US014810.
                                                                                 99US-00322289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-OCT-2003; 2003WO-US034527
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Best Local Similarity 100.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Masliah E;
                                                                                                                           (NEUR-) NEURALAB LTD
                                                                                                                                                                       Bard F,
                                                                                                                                                                                                               WPI; 2001-032104/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-411388/38.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 43 AA;
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21-MAY-2004

Synthetic.

ADP02902;

RESULT 109 ADP02902

ð 셤 Schenk DB,

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Gaps

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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity or on indicates a prognosis of improved status with respect to the disorder. The prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide from systemic inflammacory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AA (ibrils derived from serum amyloid A protein (ApoSSA); systemic semile amyloid oserum amyloid A protein (ApoSSA); systemic semile amyloid oserum amyloid A protein (ApoSSA); systemic semile composits, and familial amyloid cardiomyopathy characterised by prion protein deposits; and beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-COURT COMPSETION to treat or prevent Alzheimer's disease. (Updated on 11-SEP-COURT Composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-COURT Composition and Alzheimer's disease.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 4; Length 44; 100.0%; Pred. No. 3.1e-06;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tetanus toxoid epitope fusion construct #14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                  Disclosure, Page 46; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB46194 standard; peptide; 44 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-00322289
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 100.
nes 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 44 AA;
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Matches
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                                                                                                      This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta framents in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 c Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abbeta) to a patient. (M1) is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
or treating a disease associated with amyloid deposits, Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fusion protein #29 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                              Length 44;
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 74; DB 4; Length 44
100.0%; Pred. No. 3.1e-06;
iive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 50; 78pp; English.
                                                                         Disclosure, Page 32; 143pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADP02917 standard; peptide; 44 AA.
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                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Query Match
Best Local Similarity luv...
Best Local Similarity luv...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Parkinson's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                                                           Sequence 44 AA;
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Preventing o especially A antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
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Yednock T;

Bard F, Vasquez NJ,

Schenk DB,

WPI; 2001-032104/04

(NEUR-) NEURALAB LID.

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WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
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                                                                                                                                                                                                                                                                                                                           RESULT 114
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useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                   Gonadotrophin releasing hormone; GnEH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.

    10
    note= "Gonadotrophin releasing hormone epitope (1. .10

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                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          label= OTHER
/note= "Other= Pyro-glutamic acid or 5-oxo proline"
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                                                                                                                  Score 74; DB 8; Length 44;
Pred. No. 3.1e-06;
Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Amidated glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7. .31
note= "Tetanus toxoid (830-844 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11. .16
/note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                             Socation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stevens VC;
                                                                                                                                                                                                                         AAU11430 standard; peptide; 46 AA.
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0
                                                                                                                                                                                                                                                                                 Synthetic immunogen peptide 11.
                                                                                                                   100.0%;
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                                                                                                                                                        1 OYIKANSKFIGITEL 15
                                                                                                                                                                   Query Match
Best Local Similarity 100.00
Conservative
Conservative
                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Grimes S, Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aa) "
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                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani.
                                                                                                Sequence 44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                              12-MAR-2002
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                                                                                                                                                                                                                                                                                                                                                                       Mammalia.
Synthetic.
                                                                                                                                                                                                                                            AAU11430;
                                                                                                                                                                                                                                                                                                                                                                                          Chimeric.
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Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               androgen-dependent carcinoma; antitumour; infertility; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Helper T cell epitope, universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "invasin domain"
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/note= "tetanus toxin
38. .47
/note= "LHRH hapten"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHRH-containing immunogenic peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR62723 standard; peptide; 47 AA
                                                                                                                             Claim 11; Page 12; 43pp; English.
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94US-00229275.
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (LADD/) LADD A E (WANG/) WANG C Y (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 46 AA;
                                                                                or its analog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9425060-A1
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17-SEP-1995
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14-APR-1994;
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Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardionyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                   A multivalent vaccine comprises an immunogenic helper T-cell epitope of tetanus toxoid protein covalently linked to the B-cell epitopes of human cholesterryl ester transfer protein (CETP) (see also AAW06127). The vaccine elicits an immune response against endogenous CETP activity, and is used to treat or prevent a cardiovascular disease, such as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:27
                                                                                                                                                                                                                               Cholesteryl ester transfer protein B cell epitope linked to T cell epitope - used to generate vaccine to regulate CETP activity for decreasing the risk of developing a cardiovascular disease e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 2; Length 50; 100.0%; Pred. No. 3.5e-06; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 7; 72pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB49091 standard; protein; 51 AA.
                  96WO-US006147.
                                                             95US-00432483
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Best Local Similarity luve.
Best Local Similarity
Local Similarity
Local Similarity
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                                                                                                                                                 Thomas
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (NEUR-) NEURALAB LTD
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                                                                                                                                                                                          WPI; 1996-506103/50.
                                                                                                        SCI
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Clostridium tetani
                                                                                                                                                                                                                                                                                                        atherosclerosis.
                                                                                                                                                    Rittershaus CW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 50 AA;
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                                                                                                        (TCEL-) T CELL
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                  01-MAY-1996;
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                                                             01-MAY-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB49091;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 116
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                                                                                                                                          Synthetic immunogenic peptides are provided in which a universal immune timulator is linked to a peptide or protein hapten containing B cell and/or cytcotxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune responses to the coupled peptide in members of a heterogeneous commune responses to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid comains and between the invasin and The companies and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator and hapten component. The present sequence represents an LHRH-containing immunogenic peptide as above which can be used as a potent vaccine for treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, edemetriosis, (severe) corcine tumours, recurrent functional ovarian cysts, (severe) premensitual syndrome or oestrogen-dependent breast cancer, or for induction of infertility. (Updated on 25-MAR-2003 to correct PN field.)
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/label= B-cell_epitope
/lote= "B-cell_epitope comprises the C-terminal 16 amino
acids of human CETP, involved in neutral lipid binding or
transfer activity"
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1abel= T-cell_epitope
1abel= "T-cell epitope comprises amino acids 830-843 of
etanus toxoid protein"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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/label= B-cell_epitope
//note= "B-cell_epitope comprises amino acids 349-367
human CETP"
                                    Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note= "C-terminal Cys residue is present for use inking the peptide to itself or other molecules"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 74; DB 2; Length 47;
Pred. No. 3.3e-06;
Mismatches 0; Indels
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                                                                                                        English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
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100.0%;
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Best Local Similarity luv...
Best Local Si Conservative
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                                                                                                           Page 88; 213pp;
WPI; 1994-357910/44
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Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 47 AA;
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RESULT 115 AAW0613

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Gaps

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prognosis of a patient undergoing treatment for an amyloid disorder which prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid beta peptide fibril depositis; type 2 disbetes characterised by samyloid beta peptide fibril depositis; type 2 disbetes characterised by islet amyloid proctein peptide (TAPP, amylin) fibrils; reactive systemic rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by fibrils derived from serum amyloid A protein (ApoSSA); systemic senile
                                                                                                                                                                     The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the
Pharmaceutical composition comprising immunogen against amyloid component
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          fibrils derived from transthyretin (TTR), transmissible spongiform encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by prion protein deposits; and beta-2-microglobulin deposits which form as result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta peptide fused to a universal T-cell epitope which may be used in a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-
                            such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                   Disclosure; Page 46; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2003 to standardise OS field)
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Gaps
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100.0%; Score 74; DB 4; Length 51; 100.0%; Pred. No. 3.6e-06;
                     0; Indels
                      Mismatches
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                                          1 OYIKANSKFIGITEL 15
                                                         8 QYIKANSKFIGITEL 22
                      Conservative
         Local Similarity
es 15; Conserv
Query Match
                     Matches
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Tetanus toxoid epitope fusion construct #15.
       AAB46195 standard; peptide; 51 AA.
                       (first entry)
               AAB46195;
RESULT 117
    AAB46195
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Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.

26-MAY-2000; 2000WO-US014810. 99US-00322289 Clostridium tetani. WO200072880-A2. 28-MAY-1999; 07-DEC-2000

Schenk DB, Bard F, Vasquez NJ, Yednock T;

(NEUR-) NEURALAB LTD

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                                                                                                                                                                                                                                                                    This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Fc receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 f Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vaccine; drug delivery; encapsulation; human chorionic gonadotropin; HCG; tetanus toxoid; contraceptive.
                                                                                       or treating a disease associated with amyloid deposits, Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Enhancing immunogenic response in mammalian subject by administering biodegradable polymeric delivery system comprising one or more antigens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 4; Length 51; 100.0%; Pred. No. 3.6e-06;
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/label= TT2
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Best Local Similarity 100...
Best Local Similarity inc...
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                          WPI; 2001-032104/04
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Clostridium tetani.
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                                                                                       Preventing especially
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Wed Jan 26 07:14:42 2005

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comprises administering an immunogenic response in a mammal comprises administering a biodegradable polymeric delivery system comprises administering a biodegradable polymeric delivery system as chighly preferred embodiment, the basic additive is MGCO3 and the biodegradable polymeric delivery system is a poly(lactide-co-glycolide) (PLGA) microparticle. The present sequence is that of the CTP37-TT2 antigen. This synthetic antigen comprises a B-cell epitope from the cerninal portion of the beta chain of human chorionic gonadotropin (HCG residues 109-145) and a universal or promiscuous T-cell epitope from the creaminal portion of the beta chain of human chorionic gonadotropin (HCG residues 109-145) and a universal or promiscuous T-cell epitope from the includes an N-terminal Cys residue to facilitate further conjugation via a thiol group without altering the B- and T-cell epitopes. In an example concludes an N-terminal Cys residue to facilitate further conjugation via the invention, the immunogenicity of CTP37-TT2 peptide antigen was shown to be enhanced by encapsulation or surface-conjugated and encapsulated configuration or surface-conjugated and encapsulated antigen provided a long-lasting high anti-HCG antibody response after a single dose. The stability of the encapsulated antigen configure configure solution. This may provide stability guidelines for handling the antigen antigen in solution and for its potential use as a slow-release birth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fusion protein #30 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
and one or more basic additives to mammalian subject.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 74; DB 8; L
Pred. No. 3.6e-06;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Scu-
100.0%; Pre-
0; }
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                                      Example 1; Page 12; 39pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADP02918 standard; peptide; 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-411388/38.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 51 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-AUG-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 119
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                                                                 the brain, by administering an agent that induces an immunogenic response against alpha-symuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-symuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-symuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-symuclein or beta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasymuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to a method for generating an immune response to an antigen in a patient. The method comprises administering to the patient an immunoglobulin (Ig) or its portion where the Ig has at least one peptide epitope of the antigen attached to the Ig or its portion and administering the immunoglobulin or its portion in conjunction with a RNA segment. The present sequence is an antigen sequence, used to illustrate the invention.
                                    eventing (M1) or treating a alpha-synuclein aggregation in
                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 8; Length 51; 100.0%; Pred. No. 3.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 8; Length 54;
                                  The invention relates to a method of preventing disease characterized by Lewy bodies or alpha-sy
                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anti-melanoma drug self epitope, SEQ ID 33
Disclosure; SEQ ID NO 51; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phillips B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure, Fig 1K, 154pp, English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADL90093 standard; protein; 54 AA.
                                                                                                                                                                                                                                                                                                                                                                    ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-SEP-2002; 2002US-0412219P.
14-MAR-2003; 2003WO-US007995.
                                                                                                                                                                                                                                                                                                                                                                                                       1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                           22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bot A, Wang L, Smith D,
                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                    8 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-295415/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ASTR-) ASTRAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2004027049-A2.
                                                                                                                                                                                                                                                                                             Sequence 51 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 54 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-JUN-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADL90093;
                                                                                                                                                                                                                                                                                                                                  Query Match
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 120
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Shrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation;

Mature rat ghrelin with added epitopes (peptide 3), SEQ ID NO:15

(first entry)

17-JUN-2004

ADM06902;

ADM06902 standard; peptide; 64 AA.

anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; rat; epitope.

WO2004024183-A1

Rattus sp. Synthetic.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                     Gaps
                                                                                                                                                                                                                                                                                                     antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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                                                                                                                                                                                                                                                                           Pusion protein #28 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 8; Length 56; 100.0%; Pred. No. 4e-06; ive 0; Mismatches 0; Indels
                     Indels
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   Pred. No. 3.8e-06;
                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; SEQ ID NO 49; 78pp; English.
                                                                                                                                                                      ADP02916 standard; peptide; 56 AA.
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100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-OCT-2003; 2003WO-US034527.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-2002; 2002US-0423012P.
                                                     15
                                                                      1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                       12-AUG-2004 (first entry)
                 15; Conservative
                                                   1 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-411388/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 15; Conserv
   Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 56 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       agent that ir
beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                               21-MAY-2004.
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                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                       ADP02916;
                   Matches
                                                                                                                                                        ADP0291
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The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a phrelin managoue comprising a ghrelin B-call epitope and non-ghrelin chemical moieties to immune system, thereby inducing the production of antibodies against the animal's autologous ghrelin, a ghrelin sub-sequence or a ghrelin compositions comprising shrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a mucleic acid encoding a ghrelin analogue of the invention; a wedcres and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or ameliorating obseity or other conditions characterised by excess body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly condecreased. The method may also be used for upregulating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for upregulating ghrelin for in the creatment, preventing owned or burns, in adjuvant therapy for in the part of a part of the present of part of the part of part of the part of part of the part of part of part of the part of part of the part of part of the part of p
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         comprising mature rat ghrelin with added epitopes used in an example of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       represents a ghrelin analogue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; SEQ ID NO 15; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       related cancers. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-SEP-2003; 2003WO-DK000592
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boving TEG, Klysner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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Gaps

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1 QYIKANSKFIGITEL 15 OYIKANSKFIGITEL 36

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RESULT 122

ADM06902

15; Conservative

Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation; anti-i-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic;

immunomodulator; vulnerary; vaccine; epitope.

12-SEP-2003; 2003WO-DK000592. 12-SEP-2002; 2002DK-00001345. 12-SEP-2002; 2002US-0410164P.

WO2004024183-A1.

25-MAR-2004.

Unidentified.

Synthetic

Boving TEG, Klysner S; (PHAR-) PHARMEXA AS

Mature ghrelin with added epitopes (peptide 4), SEQ ID NO:16.

(first entry)

17-JUN-2004

ADM06903;

ADM06903 standard; peptide; 68 AA.

ADM06903

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humans) against autologous ghrelin. The method involves presenting thumans) against autologous ghrelin. The method involves presenting dyncalin (or sub-sequence thereof) or a ghrelin analogue comprising a ghrelin [or sub-sequence thereof) or a ghrelin analogue comprising a minal's autologous ghrelin. The invention of antibodies against the compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a mucleic acid encoding a ghrelin analogue of the invention; a mucleic acid encoding a ghrelin analogue of the invention; a modified ghrelin polypeptide capable of inducing attibodies against unmodified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or ameliorating obesity or other conditions characterised by excess body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for upregulating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for upregulating ghrelin for the continual or amelioration of anorexia or cachexia. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     may also be used for treating wound or burns, in adjuvant therapy for in vitro fertulisation, and for treating sprelin and ghrelin-receptor related cancers. The present sequence represents a ghrelin analogue comprising mature ghrelin with added epitopes used in an example of the
                                                                                                                                                                                               Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation; anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or anilog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                                                                       Mature ghrelin with added epitopes (peptide 5), SEQ ID NO:17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; SEQ ID NO 17; 83pp; English.
                     ADM06904 standard; peptide; 68 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-SEP-2002; 2002DK-00001345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-SEP-2002; 2002US-0410164P
                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                        WO2004024183-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 68 AA;
                                                                                                                                                                                                                                                                                                                                           Synthetic.
Unidentified.
                                                                                                          17-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Boving TEG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               invention.
                                                                  ADM06904;
ADM06904
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the invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting chemias) against autologous ghrelin. The method involves presenting a ghrelin becall epitope and non-ghrelin chemical moieties to the immune system, thereby inducing the production of antibodies against the animal sandogue of the invention; a nucleic acid encoding a ghrelin amalogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; vectors and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin, and use of inducing antibodies against unmodified autologous ghrelin, and use of inducing antibodies against unmodified autologous ghrelin, and use of inducing antibodies against unmodified autologous prelin; and use of inducing antibodies against the total amount of body fat is significantly decreased. The method may also be used for treating phrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for treating wound or burns, in adjuvant therapy for in vitro fertilesation, and for treating phrelin analogue of the invention and for treating phrelin and ghrelin analogue comprising mature ghrelin with added epitopes used in an example of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID NO 16; 83pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 68 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      invention
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Query Match
Best Local Similarity 100.0
...hes 15; Conservative

1 QYIKANSKFIGITEL 15

; 0 100.0%; Score 74; DB 8; Length 68; 100.0%; Pred. No. 4.9e-06; ive 0; Mismatches 0; Indels

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Gaps

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Length 68; Indels

100.0%; Score 74; DB 8; L. 100.0%; Pred. No. 4.9e-06; ive 0; Mismatches 0;

1 OYIKANSKFIGITEL 15 OYIKANSKFIGITEL 17

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Conservative

Best Local Similarity Matches 15; Conserv

Query Match

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                             Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                            antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 8; Length 74; 100.0%; Pred. No. 5.4e-06; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fusion protein #27 for treating neurodegenerative disorder.
Fusion protein #9 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 30; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADP02915 standard; peptide; 79 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                        31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                        01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                         (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                            Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-411388/38
                                                                                                                                       WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004041067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 74 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                agent that ind
beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-AUG-2004
                                                                                                                                                                     21-MAY-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                       Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADP02915;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreceptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of
                                                                                                                                                                                                                                      Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yednock T;
                                                                                                                                                                                                      Tetanus toxoid epitope fusion construct #10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 32; 143pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vasquez NJ,
                                                                                                    AAB46190 standard; peptide; 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADP02897 standard; peptide; 74
                                                                                                                                                                                                                                                                                                                                                                                                           26-MAY-2000; 2000WO-US014810.
                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-00322289.
                     99
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51
                                                                                                                                                                     04-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
52 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37 OYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bard F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (NEUR-) NEURALAB LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-032104/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alzheimer's disease
                                                                                                                                                                                                                                                                                                          Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 72 AA;
                                                                                                                                                                                                                                                                                                                                          WO200072880-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                              28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                           07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADP02897;
                                                                                                                                     AAB46190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 126
                                                                    RESULT 125
                                                                                       AAB46190
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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                             Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "identical to residues 267-348 of human GDF-8" 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98. 109 /
/note= "identical to residues 364-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Cys-73 may be substituted by Ser to avoid disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 8; Length 101; 100.0%; Pred. No. 7.6e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                           Disclosure; SEQ ID NO 29; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB20147 standard; protein; 109 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30 QYIKANSKFIGITEL 44
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90. .91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                      WPI; 2004-411388/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 101 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200105820-A2
                                                                                                                               beta-amyloid.
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                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a method of preventing (MI) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration is useful in the manufacture of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                             Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 8; Length 79; 100.0%; Pred. No. 5.8e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fusion protein #8 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; SEQ ID NO 48; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADP02896 standard; peptide; 101 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
                                      31-OCT-2003; 2003WO-US034527.
                                                                           01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37 OYIKANSKFIGITEL
                                                                                                                        (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (REGC ) UNIV CALIFORNIA
                                                                                                                                                                                             Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ELAN-) ELAN PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Masliah E;
                                                                                                                                                                                                                                    WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 79 AA;
                                                                                                                                                                                                                                                                                                                                               beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-AUG-2004
                                                                                                                                                                                           Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-MAY-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
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Query Match

Best Loca Matches

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RESULT 128

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AAB20145
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                                                                                                                                                                                                                                                                                                                                             The present sequence is that of AutoVac construct GDF-8 P2-3, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 83-97 are replaced by the promiscuous tetranus toxin T-cell epitope P2 (see AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth breaking autotologrance against autologous GDF-8. They comprise the C breaking autotologrance against autologous GDF-8. They comprise the C terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P2, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to a least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to creat human diseases such as cancer cachexia where muscle accounts the part of the patients suffering from acute and chronic accounts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     °,
                                                                                                                                                                                                            Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
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note= "identical to residues 267-317 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'note= "identical to residues 333-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Cys-73 may be substituted by Ser to avoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 4; Length 109; 100.0%; Pred. No. 8.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52. .66
/note= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                    Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB20146 standard; protein; 109 AA.
                                                                                                                                                                                                                                                                                                           Example 1; Page 99; 110pp; English
99DK-00001014.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           83 QYIKANSKFIGITEL 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-APR-2001 (first entry)
                                                                                                                    Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67. .109
                                                                      (MEBI-) M & B BIOTECH
                                                                                                                                                                WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
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  20-JUL-1999;
                        26-JUL-1999;
                                                                                                                    Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
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Region
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the 109 C-terminal amino and residues of human growth differentiation factor 8 (GDF-8) in which residues 52-66 are replaced by the promiscuous tetanum toxin T-cell epitope P2 (see AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth reaking autocolerance against therapeutic vaccine that is capable of breaking autocolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P2, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          present sequence is that of AutoVac construct GDF-8 P2-2, comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     is pronounced and for patients suffering from acute and chronic
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                                                                 /note= "optionally replaced by Glu-Gly"
disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 97-98; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB20145 standard; protein; 109 AA.
                                                                                                                                                                                                                                                                                                                                            99DK-00001014
99US-0145275P
                                                                                                                                                                                                                                                                           20-JUL-2000; 2000WO-DK000413
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Halkier T, Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MEBI-) M & E BIOTECH AS
                                    Misc-difference 90. .91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
Synthetic.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-112680/12.
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Best Local Similarity
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                                                                                                                                         WO200105820-A2
                                                                                                                                                                                                                                                                                                                                            20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                    26-JUL-1999;
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Modified murine interleukin-5 SEQ ID NO: 14.
                                                                                                                                                           19-APR-2000;
                                                                                                                                                                                      23-APR-1999;
                                                                                                                                                                                                 06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus.
                                                                                                                                  02-NOV-2000
                                                                                                                                                                                                                                                     Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB45526;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is that of AutoVac construct GDF-8 P2-1, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 18-32 are replaced by the promiscuous tetanus toxin T-cell epitope P2 (see AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P2, with minimal faturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the coding the GDF-8 variants can be used for genetic immunisation of the coding the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle.
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                                                                                                                                                                                                                                                                                                                                                                              Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         is pronounced and for patients suffering from acute and chronic

    .17
/note= "identical to residues 267-283 of human GDF-8"

                                                                                          'note= "identical to residues 299-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                 /note= "Cys-73 may be substituted by Ser to avoid disulfide bond formation"
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                        /note= "optionally replaced by Glu-Gly"
                                                  .32
:e= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 96; 110pp; English.
                                                                                                                                                                                                                                                                                                                                Klysner
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                                                                                                                                                                                                                                   20-JUL-2000; 2000WO-DK000413.
                                                                                                                                                                                                                                                               99DK-00001014.
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                                                                            33. .109
                                                                                                                                                                                                                                                                                                     (MEBI-) M & E BIOTECH AS
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                                                                 /note=
                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
Matches 15; Conserv
                                                                                                                                           Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 109 AA;
                                                                                                      Misc-difference
                                                                                                                                                                                 WO200105820-A2
                                                                                                                                                                                                                                                            20-JUL-1999;
26-JUL-1999;
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             Key
Region
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AAB45502 standard; protein; 116 AA.

(first entry)

26-FEB-2001

AAB45502;

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
Asthma, IL-5; interleukin-5; allergy, cytokine, helminthic infection; cancer; eosinophilia, vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia, vaccine, allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 100.0%; Score 74; DB 3; Length 116; I Similarity 100.0%; Pred. No. 8.8e-06; 15; Conservative 0; Mismatches 0; Indels
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                                                                     Mus musculus.
Clostridium tetani.
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06-MAY-1999;
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
            proteins and their coding sequences to down-regulate IL-5 activity and thus reduce costnophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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 and modified IL-5
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                                                                                                                                        Length 118;
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 involve the use of interleukin-5 (IL-5) analogues
                                                                                                                                    100.0%; Score 74; DB 3;
100.0%; Pred. No. 9e-06;
tive 0; Mismatches 0
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                                                                           helminthic infections
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                                                                                                                   Query Match
Best Local Similarity
Local 15; Conserve
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15; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
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                                                                                                         Sequence 118 AA;
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Best Local S:
Matches 15
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                                                                                                                    Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                                                                            The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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                                                                                                                                                                                Disclosure; Page 159-160; 172pp; English.
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Les 15; Conservative
            (MEBI-) M & B BIOTECH AS
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                                                                      2000-672791/65
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                                                                        WPI; 2000-672791/
N-PSDB; AAC68879.
                                                                                                                                                                                                                                                                                                                                                      Sequence 116 AA;
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06-MAY-1999;
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                                           Klysner S;
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Matches
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Mus musculus.
Clostridium tetani.
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                                        WO200065058-A1
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06-MAY-1999;
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                                                           02-NOV-2000
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                                                                                                                                                                                                                                                                                                                                     Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                          Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                       Modified murine interleukin-5 SEQ ID NO: 54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified murine interleukin-5 SEQ ID NO: 15.
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                                               AAB45527 standard; protein; 122 AA.
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32 QYIKANSKFIGITEL
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Best Local Similarity
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                                                                                                                                                               Clostridium tetani,
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                                                                                                                                                                                  WO200065058-A1.
                                                                                                                                                       musculus
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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100.0%; Pred. No. 9.3e-06;
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99US-0132811P.
19-APR-2000; 2000WO-DK000205.
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Best Local Similarity 100.
Matches 15; Conservative
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                       The present invention is concerned with methods of treating asthma, eosinophilia, allergic thinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophili numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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                                                                                                                        Example 4; Page 131; 172pp; English
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N-PSDB; AAC68872.
                WPI; 2000-672791/65.
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06-MAY-1999;
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is possible that they may be used in the treatment
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                                                                             9.5e-06;
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Pred. No. S
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Best Local Similarity 100.
Matches 15; Conservative
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             helminthic infections
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Clostridium tetani.
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                            19-APR-2000; 2000WO-DK000205
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                                                                                                                                                                                                                Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                    AAB45492 standard; protein; 124 AA.
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06-MAY-1999;
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AAB45492
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                                                                The present invention is concerned with methods of treating asthma, ecsinophila, allergic thintis and other allergic diseases. These involve the use of interleukin-5 (L-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosimophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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amelioration of asthma or other chronic allergic conditions
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                                Example 4; Page 129; 172pp; English
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                                                                                                                                                                                          helminthic infections
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Clostrídium tetani.
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les 15; Conserv
                                                                                                                                                                                                                             Sequence 124 AA;
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Matches
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100.0%; Score 74; DB 3; Length 124;

Query Match

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                                                                                                                                                                                                                                                                                                                                                                                                            Asthma, IL-5; interleukin-5; allergy, cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                      AAB45517 standard; protein; 124 AA.
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99US-0132811P.
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                            86 QYIKANSKFIGITEL 100
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QYIKANSKFIGITEL
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Clostridium tetani.
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06-MAY-1999;
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                                                                                                                                   RESULT 145
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sapiens

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23-APR-1999; 06-MAY-1999;

Klysner S;

02-NOV-2000

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                                                                                                                                                                                                                                                                                                  eosinophilia, allergic rhintiss and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
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eosinophilia; vaccine; allergic rhinitis.
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99US-0132811P
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99US-0132811P
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Clostridium tetani
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06-MAY-1999;
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06-MAY-1999;
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                                                                             Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                     Modified human interleukin-5 SEQ ID NO: 2.
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99US-0132811P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-672791/65.
                                                                                                                                                                                                      Clostridium tetani
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les 15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 126 AA;
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sapiens

02-NOV-2000

26-FEB-2001

AAB45494;

RESULT 147

AAB45494

Query Match

Best Loc Matches

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Gaps

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru, haemodialyais-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amyloid beta tetanus toxoid/HA/CS fusion protein, SEQ ID NO:25
                                                                                                                                                                                   100.0%; Score 74; DB 3; Length 126; 100.0%; Pred. No. 9.7e-06;
                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                       Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                  AAB49089 standard; protein; 136 AA.
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                                                                                                                                                                                                                                                                                88 QYIKANSKFIGITEL 102
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                                                                                                                                                                                                                                                         1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                       15; Conservative
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                                                                                          Influenza virus.
Plasmodium falciparum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-070921/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                    Local Similarity
                                                                                                                                               Sequence 126 AA;
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four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The prognosis of improved status with respect to the disorder. The wide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril depositis; type 2 diabetes characterised by anyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils derived from serum amyloid a protein (ApoSSA); systemic senile amyloidosis and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform cancellalogates and familial anyloid cardiomyopathy characterised by prion protein deposits, and beta-2-microglobulin deposits which form as a result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-2003 to standardise OS field)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              compound for prevention and treatment of allergies comprises at least allergen antigenic determinant recognized by a B cell and at least antigenic determinant which does not trigger T cell activation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes a compound (1) for the prevention and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             T cell epitope, B cell epitope, allergy; allergen, antigenic; antiallergic; antiasthmatic; antiinflammatory; dermatological; immunosuppressive, vaccine, rhinitis, sinusitis, bronchial asthma; atopic dermatitis; acute urticaria; chronic urticaria; gastro-intestinal syndrome; food allergen; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tetanus toxoid T cell epitopes and Der pII B cell epitopes peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 136;
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100.0%; Pred. No. 1.1e-05;
tive 0; Mismatches 0;
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nes 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 136 AA;
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treatment of allergy. The compound comprises at least one allergen antigenic determinant (i) recognised by a B cell or an antibody secreted by a B cell of a non-atopic individual and at least one antigenic determinant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antiinflammatory. Cermathological and immunosuppressive activities, and can be used in a vaccine. (I) may be used in a pharmaceutical or cosmetic medicament to treat and/or prevent allergies or a disease of allergic origin, bronchial asthma, atopic dermattis, some forms of acute and chronic urticaria, gastro-intestinal syndromes associated with the ingestion of food allergens, oro-pharyageal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or a mixture of these. The use of (I) in the treatment of allergic conditions avoids the need for drug therapies alleviate symptoms, but do not influence their causes, however (I) actually combats the cause of an allergic reaction. The present sequence represents a specifically claimed compound peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) proteins and modified IL-5 proteins and their coding sequence to down-regulate IL-5 activity are thus reduce eosinophil numbers. The allergic diseases may be treated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified murine interleukin-5 SEQ ID NO: 22.
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                                                                                                                                                                                                                                                                                                                                                        sequence from the present invention
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99US-0132811P.
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                                                                                                                                                                                                                                                                                                                                                                                              Sequence 137 AA;
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06-MAY-1999;
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using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                      Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                 100.0%; Score 74; DB 3; Length 139; 100.0%; Pred. No. 1.1e-05;
                                                                                                                               Indels
                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                      Modified human interleukin-5 SEQ ID NO: 11.
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                                                                                                                                                                                                                                                                           AAB45499 standard; protein; 141 AA.
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99US-0132811P.
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                                                                                                                                                                                              84 OYIKANSKFIGITEL 98
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helminthic infections
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clostridium tetani.
                                                                                                                   Best Local Similarity
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                                                                   Sequence 139 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
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                                                                                                                                                                                                                                                                                                           AAB45499;
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RESULT 153

AAB45530

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis; cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 3; Length 147; 100.0%; Pred. No. 1.1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                       Example 12; Page 153; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW81331 standard; protein; 158 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                         99DK-00000552.
99US-0132811P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TNF2-7, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0044187P
                                                                         2000WO-DK000205
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15
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Best Local Similarity 100.us
Best Local Similarity 100.us
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouritsen S,
                                                                                                                                                               (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                        WPI; 2000-672791/65.
N-PSDB; AAC68875.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 147 AA;
WO200065058-A1.
                                                                       19-APR-2000;
                                                                                                         23-APR-1999;
06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .5-APR-1998;
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                            02-NOV-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-OCT-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jensen MR,
                                                                                                                                                                                                      Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW81331;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              asthma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 155
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                             Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                           Modified murine interleukin-5 SEQ ID NO: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Modified human interleukin-5 SEQ ID NO: 44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 12; Page 166-167; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB45522 standard; protein; 147 AA.
               AAB45530 standard; protein; 145 AA
                                                                                                                                                                                                                                                                                                                                                  19-APR-2000; 2000WO-DK000205
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                                                                                      (first entry)
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      helminthic infections
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                                                                                                                                                                                                                                        Clostridium tetani.
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Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAC68883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 145 AA;
                                                                                                                                                                                                                                                                         WO200065058-A1
                                                                                                                                                                                                                     Mus musculus.
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                                                                                        26-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                          06-MAY-1999;
                                                                                                                                                                                                                                                                                                             02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Klysner S;
                                                   AAB45530;
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RESULT 154

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AAB45522

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Gaps

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Claim 14; Page 67-68; 134pp; English.

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                                                                                                                                                   alpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscouse epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive relativity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative collitis, cancer of any soft, disseminated sclerosis, diabetes, psoriasis, osteoporosis and
                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                       The present sequence represents a modified human tumour necrosis factor
                                          Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue;
vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
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                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 2; Length 158; 100.0%; Pred. No. 1.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW81328 standard; protein; 158 AA.
                                                                                                       Claim 13; Page 73; 134pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TNF2-3, a TNF-alpha analogue.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97DK-00000418
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OYIKANSKFIGITEL 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (FERR ) FARM LAB FERRING AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0
...hes 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 QYIKANSKFIGITEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-594561/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAV68417.
              N-PSDB; AAV68420
                                                                                                                                                                                                                                                                                                                                                                                             Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jensen MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAW81328;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        asthma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 156
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The present sequence represents a modified human tumour necrosis factoralpha (Thr-alpha) analogue. The analogues have no residual Thr activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The Thr-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human Thr alpha, has at least one fragment of Thr substituted by a peptide containing an immunodominant T-cell epitope, and at least one Thr-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The Thrapha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNR-alpha, e.g. rheumatchid arthritis, Crohn's disease, ulcerative colitis, cancer of any soft.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analoque. The analoques have no residual TNF activity and are immunogenic in a large proportion of the human population (by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vaccine, rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer; disseminated sclerosis, diabetes, psoriasis, osteoporosis; asthma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human tumour necrosis factor-alpha; INF-alpha; INF-alpha analogue;
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                                                                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 74; DB 2; Length 158; Best Local Similarity 100.0%; Pred. No. 1.2e-05; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; Page 69-70; 134pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAW81329 standard; protein; 158 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNF2-4, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97DK-00000418.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            66 QYIKANSKFIGITEL 80
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-APR-1999 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-594561/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAV68418.
                                                                                                                                                                                                                                                                                                                               Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens,
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                                                                                                                                                                                                                                                                                                asthma
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW81329
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in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and promiscuous epitopes). The TNF-alpha analogue is able to generate

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Sequence 158 AA;

Gaps ö Length 158; 0; Indels 100.0%; Score 74; DB 2; L 100.0%; Pred. No. 1.2e-05; ive 0; Mismatches 0; Conservative Local Similarity les 15; Conser Query Match Best Loc Matches

115 OYIKANSKFIGITEL 129 1 OYIKANSKFIGITEL 15 ò g

RESULT 158 AAW81330 AAW81330;

AAW81330 standard; protein; 158 AA.

(first entry) 21-APR-1999

TNF2-5, a TNF-alpha analogue.

Human tumour necrosis factor-alpha, TNF-alpha, TNF-alpha analogue, vaccine, rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer, disseminated sclerosis, diabetes, psoriasis, osteoporosis;

asthma.

Homo sapiens. Synthetic

WO9846642-A1

22-OCT-1998

98WO-DK000157 15-APR-1998; 97DK-00000418 97US-0044187P 15-APR-1997; 24-APR-1997;

(FERR) FARM LAB FERRING AS

Dalum I; Elsner H, Mouritsen S, Jensen MR,

WPI; 1998-594561/50. N-PSDB; AAV68419.

Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.

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Claim 12; Page 71; 134pp; English.

The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The INF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting

e.g. loops or any of the B', I or D strands in the back beta-sheet. The TN alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of ThF-alpha, rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and 888888888

Sequence 158 AA;

Gaps ö Length 158; Conservative Similarity Query Match Best Local Simi Matches 15;

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147 12 1 QYIKANSKFIGITEL |||||||||||| 133 QYIKANSKFIGITEL

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RESULT 159 AAW81327

Ź AAW81327 standard; protein; 158

AAW81327;

(first 21-APR-1999

TNF2-1, a TNF-alpha analogue.

Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis; cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis; asthma.

Synthetic

Homo sapiens.

WO9846642-A1

22-OCT-1998

98WO-DK000157. 15-APR-1998; 97DK-00000418. 97US-0044187P. 15-APR-1997; 24-APR-1997;

LAB FERRING AS (FERR) FARM Dalum I; Jensen MR, Mouritsen S, Elsner H,

WPI; 1998-594561/50. N-PSDB; AAV68416

Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.

Example 1; Page 65-66; 134pp; English.

The present sequence represents a modified human tummour necrosis factoralpha analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I on D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of the underest and the scalese or activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any contains and cancer of successive teles.

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                                                                                                                                                                                                                                                                                                                                                                    TNF-alpha, pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as
                                                                            Gaps
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                                      Length 158;
                                                                        Indels
                                  100.0%; Score 74; DB 2; I 100.0%; Pred. No. 1.2e-05;
                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bouman MHEM;
                                                                                                                                                                                                                             ABB07277 standard; protein; 158 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 21; Page 39; 55pp; English
                                                                                                                                                                                                                                                                                                                                     Human TNF-alpha analogue TNF2-7.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUN-2001; 2001WO-DK000431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUN-2000; 2000DK-00000966
                                                                                                         1 OYIKANSKFIGITEL 15
                                                                                                                                          11 QYIKANSKFIGITEL 25
                                                                                                                                                                                                                                                                                                    (first entry)
                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Olesen OF, Balchen T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-114542/15.
                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (FERR ) FERRING BV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; ABA94387
Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 158 AA;
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                                      Mac
Local Sim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             solubilizer.
                                                                                                                                                                                                                                                                  ABB07277;
                                  Query Match
                                                                                                                                                                                              RESULT 160
                                                                      Matches
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INF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; ectypyridinium chloride; immunisation; antiinflammacroy; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                       Novel vaccine composition for prevention/treatment of self-protein-
                                                                                                                                                                                                                                                                                                                                                                                               mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting
                                                                                                                                                                                                                                                                                                                                      Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 21; Page 46-47; 55pp; English.
                                                                     ABB07281 standard; protein; 158 AA.
                                                                                                                               Human TNF-alpha analogue TNF2-4.
                                                                                                                                                                                                                                                                         20-JUN-2001; 2001WO-DK000431.
                                                                                                                                                                                                                                                                                              21-JUN-2000; 2000DK-0000966
         OXIKANSKFIGITEL 91
                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                     Olesen OF, Balchen
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                                                                                                                                                                                                                                 WO200197837-A1
                                                                                                                                                                                                               Homo sapiens.
                                                                                                           26-MAR-2002
                                                                                                                                                                                                                                                      27-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                    solubilizer.
                                                                                        ABB07281;
                 77
                                                                                                                                                                                            TNF2-4.
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The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunoganic self-protein composition compiled in the self-protein as a solubilizer. (1) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (1) is useful for inducing autoantibodies to a delf-protein such as TMF (tumour necrosis factor)—alpha in a human subject. (1) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human for immunisation of a human seconds and a numan for immunisation of a human subject or for treatment of a human TNF-alpha Sequence 158 AA; analogue TNF2-4

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Gaps
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0
100.0%; Score 74; DB 5; Length 158; 100.0%; Pred. No. 1.2e-05;
                        Indels
                          Mismatches
  100.0%; --
100.0%; --
           Best Local Similarity 100.
Matches 15, Conservative
Query Match
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RESULT 162 ABB07276

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Gaps

; 0

Indels

Length 158;

100.0%; Score 74; DB 5; I ilarity 100.0%; Pred. No. 1.2e-05; Conservative 0; Mismatches 0;

Query Match Best Local Similarity Matches 15; Conserv

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The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TRR-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colltis or crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TMF (tumour necrosis factor) -lapha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory disease. The present sequence represents a human TMF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human;
                        TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; ectylpyridhiuw chloride; immunisation; antiinflammatory; antirheumatic; entiarthritic; antiinfer; cytostatic; antidiabetic; antipsoriatic; antiarthritic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel vaccine composition for prevention/treatment of self-protein-
mediated pathology such as cancer, diabetes and asthma, comprises
modified immunogenic self-protein and surfactant capable of acting as
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100.0%; Pred. No. 1.2e-05;
ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 21; Page 35-36; 55pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human TNF-alpha analogue TNF2-1.
                                                                                                                                                                                                                                                                                                                20-JUN-2001; 2001WO-DK000431.
                                                                                                                                                                                                                                                                                                                                                            21-JUN-2000; 2000DK-0000966
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Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Olesen OF, Balchen T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-114542/15
N-PSDB; ABA94385.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           analogue TNF2-5
                                                                                                                                                                                                                  WO200197837-A1
                                                                                                                                                                     Homo sapiens.
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                                                                                                                                                                                                                                                                 27-DEC-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  solubilizer.
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                                                                                                                         TNF2-5.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition compisies at least one modified immunogenic self-protein exceptions and a least one modified immunogenic self-protein acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TWF (tumour necrosis factor)-alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory disease. The present sequence represents a human TNF-alpha
                                                                                                                                                                                    TNF-alpha, pharmaceutical, vaccine, self-protein, tumour necrosis factor, cetylpyridinium chloride, immunisation, antiinflammatory, antirheumatic, antiarthritic, antiulcer, cytostatic, antidiabetic, antipsoriatic, antiasthmatic, immunomodulator, neuroprotective, osteopathic, human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as solubilizer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 5; I 100.0%; Pred. No. 1.2e-05; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 21; Page 37-38; 55pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human TNF-alpha analogue TNF2-5.
ABB07276 standard; protein; 158
                                                                                                                                        Human TNF-alpha analogue TNF2-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-JUN-2001; 2001WO-DK000431
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                                                                                           26-MAR-2002 (first entry)
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Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 QYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Olesen OF, Balchen T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-114542/15.
N-PSDB; ABA94386.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            analogue TNF2-3
                                                                                                                                                                                                                                                                                                                                                                                   WO200197837-A1.
                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
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The present sequence is that of AutoVac construct GDF-8 ext, which consists of the C-terminal 160 amino acids of human growth differentiation factor 8 (GDF-8, see AAF20131) with residues 16-36 substituted by the promiscuous tetanus toxin T-cell epitope P30 (see AAB20144) and residues 37-51 substituted by tetanus toxin T-cell epitope P30 (see AAB201443). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting downers animals. The vaccines (see AAB20145-53) are capable of farminals. The vaccines (see AAB20145-53) are capable of breaking autocolerance against autologous GDF-8. They comprise the C-terminal cortion of human GDF-8 in which a portion of the native sequence is cutocolerance against autologous GDF-8. They comprise the C-terminal cutoflerance can be used for genetic immunisation of the animals. Compresquiation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to receive the med for matibiotic feed-additives. Anti-GDF8 vaccines can be used to receive the man diseases such as cancer cachexia where muscle atrophy is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA encoding osteoprotegerin ligand/tetanus toxoid P30 epitope fusion.
                                                                     52. .160
/note= "identical to residues 267-375 of human GDF-8"
                                                                                                                                           to avoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 4; Length 160; 100.0%; Pred. No. 1.3e-05; ive 0; Mismatches 0; Indels
                                                                                                                                    /note= "Cys-124 may be substituted by Ser
disulfide bond formation"
                                                                                                                                                                                 141. .142
/note= "optionally replaced by Glu-Gly"
      /note= "tetanus toxoid P30 epitope"
                       .51
te= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 107-108; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Klysner S;
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99US-0145275P.
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Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MEBI-) M & B BIOTECH AS.
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                              /note= '51
52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-112680/12.
                                                                                                               Misc-difference 124
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                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                                    WO200105820-A2.
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                                                                        Region
                              Region
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ID AAY8
XX
AC AAY8
XX
DT 25-J
XX
DE DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TNR-lpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human for immunisation of a human subject or treatment of a human inflammatory disease. The present sequence represents a human TNF-alpha

    15 .15 /note= "identical to residues 215-230 of human GDF-8"
    16 .36

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                             Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Growth differentiation factor 8 AutoVac construct GDF-8 ext.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 74; DB 5; Le
100.0%; Pred. No. 1.2e-05;
                                                                                                                                                                                                                                                                    Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 21; Page 44-45; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB20153 standard; protein; 160 AA.
                                                                                                                             20-JUN-2001; 2001WO-DK000431.
                                                                                                                                                                          21-JUN-2000; 2000DK-0000966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OXIKANSKFIGITEL 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                  Olesen OF, Balchen T,
                                                                                                                                                                                                                                                                                                       WPI; 2002-114542/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
Clostridium tetani.
Synthetic.
                                                                                                                                                                                                                      (FERR ) FERRING BV.
                                                                                                                                                                                                                                                                                                                                   N-PSDB; ABA94390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 158 AA;
                                         WO200197837-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 analogue TNF2-1
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                               solubilizer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB20153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric.
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Gaps

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Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis; tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption; ss.

15. .112 /note= "residues 158-255 of murine OPGL"

.127

Protein Peptide

Peptide

Key

Location/Qualifiers /note= "His tag"

Synthetic. Clostridium tetani.

Mus musculus

/note= "residues 262-316 of murine OPGL" /note= "tetanus toxoid P2 epitope" 128. .182

WO200015807-A1

Protein

99WO-DK000481 98DK-00001164

13-SEP-1999; 15-SEP-1998; 02-OCT-1998;

23-MAR-2000

(MEBI-) M & B BIOTECH AS Halkier T, Haaning J; WPI; 2000-271444/23. N-PSDB; AAZ99971.

An osteoprotegerin ligand/tetanus toxoid P30 epitope fusion.

(first entry)

25-JUL-2000

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The present sequence represents fusion protein of murine osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which is a secreted member of the tumour necrosis factor receptor family, which is blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is solveptides are 17% homologous. OPGL is a potent osteoclast the murine and human OPGL oplypeptides are 87% homologous. OPGL is a potent osteoclast the differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also a nativator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at least one OPGL polypeptide or subsequence, and/or at method and OPGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
              Osteoprotegerin ligand, OPGL, osteoprotegerin, osteoclastogenesis, tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                                    145. .159
/note= "tetanus toxoid P2 epitope"
160. .173
/note= "residues 303-316 of murine OPGL"
                                                                                                                                                                                                                                     /note= "residues 158-287 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example; Page 99-100; 110pp; English.
                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                     1. .14
/note= "His tag"
                                                                                                                                                                                                                                                                                                                                                                                                               99WO-DK000481
                                                                                                                                                                                                                                                                                                                                                                                                                                               98DK-00001164
98US-0102896P
                                                                                                                                                                                                                       . 144
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Haaning J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-271444/23.
N-PSDB; AAZ99972.
                                                                                                  Synthetic.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 173 AA;
                                                                                                                                                                                                                                                                                                                                           WO200015807-A1
                                                                                                                                  Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                               13-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                               15-SEP-1998;
02-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Halkier T,
                                                                                                                                                                    Key
Peptide
                                                                                                                                                                                                                     Protein
                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                         Protein
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The present sequence encodes a fusion protein of murine osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL colypeptides are 81% homologous. OPGL is a potent osteoclast. differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also a activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at method and OPGL polypeptide are useful for treating, preventing and method and oPGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 3; Length 182; 100.0%; Pred, No. 1.4e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example; Page 97-98; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            113 QYIKANSKFIGITEL 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15; Conservative
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 182 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.

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Gaps .; 0

Indels

Length 173;

100.0%; Score 74; DB 3; L ilarity 100.0%; Pred. No. 1.4e-05; Conservative 0; Mismatches 0;

Query Match Best Local Similarity Matches 15; Conserv

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AAY84424 standard; protein; 182 AA.

RESULT 167

AAY84424;

SKA

12

1 OYIKANSKFIGITEL

ઠ 셤 RESULT 168

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Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; mutein; variant; tetanus toxoid; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                  Human TNFalpha variant, TNF34-P2-P30.
             AAO30488 standard; protein; 194 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      .5-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOURITSEN S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                            WO2003042244-A2.
                                                                                                                                                                                        Homo sapiens
Unidentified
                                                                     22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                         22-MAY-2003.
                                         AAO30488;
                                                                                                                                                                                                                     Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (PHAR-)
                                                                                                                                                                                                                                                Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (KLYS/)
                                                                                                                                                                                                                                                                                           Region
                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                   Region
AAO30488
               The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNFalbha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with an inserted tecanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                     Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease;
tumour necrosis factor alpha; gene therapy; arthritis; human; mutant;
mutein; variant; tetanus toxoid; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 6; Length 194; 100.0%; Pred. No. 1.6e-05; live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                    /note= "Human TNP"
110. .130
/note= "Tetanus toxoid P30 epitope"
131. .145
/note= "Tetanus toxoid P2 epitope"
146. .194
/note= "Human TNP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 23; Page 159-160; 196pp; English.
                                                                                            Human TNFalpha variant, TNF34-P30-P2.
                                                                                                                                                                                                                                           Location/Qualifiers
    AAO30489 standard; protein; 194 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                             15-NOV-2002; 2002WO-DK000764
                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 194 AA;
                                                                                                                                                                                                                                                                                                                                                                                      WO2003042244-A2
                                                                                                                                                                                Homo sapiens.
Unidentified.
Chimeric.
                                                               22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                   22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Klysner S,
                                    AAO30489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (KLYS/)
(NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (PHAR-)
                                                                                                                                                                                                                                          Key
Region
                                                                                                                                                                                                                                                                                    Region
                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                             Region
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/note= "Tetanus toxoid P2 epitope" 125. .145 /note= "Tetanus toxoid P30 epitope" 146. .194 .124 e= "Tetanus toxoid P2 epitope"

iocation/Qualifiers

.109

(first entry)

"Human TNF"

'note=

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                                             The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (115) and tumour necrosis factor alpha (TNP, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with an inserted tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 .;
0
                                                                                                                                                                                                                                                                                                                                                              Length 194;
                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 74; DB 6; L
100.0%; Pred. No. 1.6e-05;
ive 0; Mismatches 0;
Claim 23; Page 158; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110 QYIKANSKFIGITEL 124
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Best Local Similarity 100.000
Tothes 15; Conservative
                                                                                                                                                                                                                                                                                                     Sequence 194 AA;
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Mouritsen S;

Voldborg B,

Bratt T,

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Gaps ..

145

131 OYIKANSKFIGITEL

RESULT 169

1 OYIKANSKFIGITEL 15

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Conservative

Best Local Similarity Matches 15; Conserv

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This is an immunogenized MUC-1 analogue containing foreign epitopes P2 and P30. Immunogenic analogues of MUC-1 and, e.g. human prostate specific and P30. Immunogenic analogues of MUC-1 and, e.g. human prostate specific centembrane antigen (hPSM) can be used in the claimed method as an autovaccine to induce a CTL response. Subolominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms (see features table). 10 regions suitable for the insertion of foreign T helper epitopes were identified. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. hPSM, heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the C cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and changed to predicted CTL and B-cell epitopes of the respective PA and including at correign to effect proper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human CPSM, FGF8b and Herz, respectively. Note: This sequence does not appear in the specification. It was made using the mucin repeat sequence CC (AAV92564), pp. and P30 (AAV92562-26), which appear on pages 220, 213 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouritsen S, Nielsen KG, Haaning J, Leach D, Dalum I;
                                                                                                                                                                                                                                                                                                                                              Mucin repeat; MUC-1 analogue; vaccination; self-protein; cancer; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                         MUC-1 analogue containing foreign epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (AAY92664), P2 and P30 (AAY92625-26), v
214 respectively, of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
61. .75
/label= P2
136. .156
/label= P30
/note= "q"
                                    AAY92665 standard; peptide; 216 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 4; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-DK000525.
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98US-0105011P.
                                                                                                                                                                                               (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-349917/30.
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                                                                                                                                                                                               10-AUG-2000
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20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gautam A,
                                                                                                                  AAY92665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
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AAY92665
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The present sequence is that of AutoVac construct GDF-8 dimer comprising 2 copies of the 109-amino acid C-terminal region of human growth differentiation factor 8 (GDF-8, see AAF20141) convalently connected through the P2 and 80 T-cell epitopes (see AAB20143-44) of tetanus toxin. It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                         Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Region 146. .254
/note= "109 C-terminal residues of human GDF-8"
Misc-difference 235. .236
                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "109 C-terminal residues of human GDF-8"
                                                                                                                                                                                                                            Growth differentiation factor 8 AutoVac construct GDF-8 dimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            110. .124
/note= "tetanus toxoid P2 epitope"
125. .145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 105-106; 110pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                             AAB20152 standard; protein; 254 AA.
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99US-0145275P
1 OYIKANSKFIGITEL 15
                                            75
                                                                                                                                                                                              (first entry)
                                61 QYIKANSKFIGITEL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                              Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Misc-difference
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26-JUL-1999;
                                                                                                                                                                                             30-APR-2001
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                                                                                                                                                                                                                                                                                                                                                             Synthetic.
Chimeric.
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0; Gaps

Query Match 100.0%; Score 74; DB 3; Length 216; Best Local Similarity 100.0%; Pred. No. 1.7e-05; Matches 15; Conservative 0; Mismatches 0; Indels

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Length 285;

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct which comprises 2 human interleukin 5 (IL5) monomers joined by tetanus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the
                                                                                                                                                                                                                                                                                                                                                  Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
    2 human interleukin 5 (IL5) monomers joined by tetanus toxoid P30 and P2. This sequence is used to illustrate the method of
                                                                                                                                                                                                                                                                                                                        hIL5-P2-P30-hIL5 (hIL5.35) fusion construct protein.
                                                                                     100.0%; Score 74; DB 6; I
100.0%; Pred. No. 2.4e-05;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Mature hIL5.35 protein"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                      AAO30458 standard; protein; 285 AA.
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                                                                                                                                                           156 QYIKANSKFIGITEL 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   L5-NOV-2002; 2002WO-DK000764
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16-NOV-2001; 2001US-0331575P.
                                                                                                                                          QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                 Conservative
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                                                                     Query Match
Best Local Similarity
15, Conserv
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NIELSEN F S.
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VOLDBORG B.
                                                            Sequence 285 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
Unidentified.
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                                  invention
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(KLYS/) I
(NIEL/) I
(BRAT/) I
(VOLD/)
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ID AAO3
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                                                                                                                                                                                                                                                                                                                                                                      Multimeric protein; interleukin 5; IL5; TWFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF® vaccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart failure
                                                                                                                                          Gaps
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                                                                                                             Length 254;
                                                                                               hIL5-P30-P2-hIL5 (hIL5.34) fusion construct protein.
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/note= "Human IL5 leader peptide"
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.e= "Mature hIL5.34 protein"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                             AAO30457 standard; protein; 285 AA.
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16-NOV-2001; 2001US-0331575P.
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                                                                                                                                                               1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                    Query Match
Best Local Similarity 100.
Matches 15, Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note=
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KLYSNER S.
NIELSEN F S.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B.
                                                                                Sequence 254 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
Unidentified.
Chimeric.
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Peptide
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(KLYS/)
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(BRAT/)
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AAO30457
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Mouritsen S;

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (115) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition
comprises 2 human interleukin 5 (IL5) monomers joined by diglycine linker and including terminally positioned tetanus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                     Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.
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composition for treating inflammatory diseases e.g. arthritis.
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                                                                                         Length 287;
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/note= "Human IL5 leader peptide"
                                                                                           100.0%; Score 74; DB 6; I
100.0%; Pred. No. 2.4e-05;
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                                                                                                                        Mismatches
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                                                                                                                                                                          273 QYIKANSKFIGITEL 287
                                                                                                                                                        12
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                                                                                                        1 Similarity 100.
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                                                                                                                                                                                                                                                                                                                                                          hILS.37 variant protein.
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(KLYS/) KLYSNER S.
(NIEL/) NIELGEN F S.
(BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
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NIELSEN F S.
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                                                              Sequence 287 AA;
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Unidentified.
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                       Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.
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                                                            100.0%; Score 74; DB 6; Length 285; 100.0%; Pred. No. 2.4e-05; ive 0; Mismatches 0; Indels
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                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note= "Human IL5 leader peptide"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 20; Page 115-117; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                  AAO30459 standard; protein; 287 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-NOV-2002; 2002WO-DK000764.
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16-NOV-2001; 2001US-0331575P.
                                                                                                                                         1 QYIKANSKFIGITEL 15
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                                                                           Local Similarity 100.
Les 15; Conservative
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                                                                                                                                                                                                                                                                                                                          hIL5.36 variant protein.
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NIELSEN F S.
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                                Sequence 285 AA;
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Unidentified.
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   invention
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(NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
                                                            Query Match
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Matches
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WO2003042244-A2
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                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                            Unidentîfied.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-MAY-2003.
                                                                                                                                                                                                                                                                                  AAO30491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (KLYS/)
(NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Region
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                                                                                                                                                                                                                                             RESULT 177
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for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct variant which comprises 2 human interleukin 5 (ILS) monomers joined by diglygine linker and including terminally positioned tetranus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel recombinant protein as vaccine for treating malarial infection comprises antigenic peptides obtained from different stages of plasmodium falciparum life cycle.
                                                                                                                                                                                                                                                                              Recombinant protein, CDC/NIIMALVAC-1; multivalent, malaria, vaccine, real-lepitope, treanue toxoid, antigent epitope; treatment, circumsporozoite protein, GSP, sporozoite surface protein-2; SSP-2; liver stage antigen-1; LSA-1; merozoite surface protein-1, MSP-1, MSP-2; applical membrane antigen-1, AMA-1; erythrocyte binding antigen-175; EBA-175; rhoptry associated protein-1, RAP-1; gamete specific antigen; Pfg27, antiparasitic; prevention; anti-CDC/NIIMALVAC-1 antibody;
                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence is that of recombinant protein CDC/NIIMALVAC-1,

    350
    Jabel= Mature CDC/NIIMALVAC-1
    /note= "Recombinant multivalent malarial vaccine"

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0
                                                                               100.0%; Score 74; DB 6; Length 287; 100.0%; Pred. No. 2.4e-05;
                                                                                                  0; Indels

    .22
    /label= Melittin signal peptide
/note= "Derived from Honey bee"

                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (NAIM-) NAT INST IMMUNOLOGY.
(USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                            Recombinant vaccine CDC/NIIMALVAC-1.
                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                         AAY70278 standard; protein; 350 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 3; Page 43-44; 52pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US018869
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                                                                                                                     1 OYIKANSKFIGITEL 15
                                                                                                                                (first entry)
                                                                                      Local Similarity 100.
                                                                                                                                                                                                                                (revised)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAZ51336.
                                                            Seguence 287 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200011179-A1
                                                                                                                                                                                                                                                                                                                                                                      Apis, sp.
Clostridium t
Plasmodium fe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-AUG-1998;
                                                                                                                                                                                                                              12-SEP-2003
06-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-MAR-2000
                                                                                                                                                                                                                                                                                                                                         Pfg27; ant honey bee.
                                                                                                                                                                                                           AAY70278;
                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                     Chimeric
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                                                                                                 Matches
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which is a multivalent, multistage malarial vaccine. The recombinant protein comprises, melittin signal peptide, (His)6 tag, T-cell epitope from tetanus toxoid and 21 antigenic epitopes from circumsporozoite protein (CSP), sporozoite surface protein-2 (SSP-2), liver stage antigen-1 (LSA-1), merozoite surface protein-1 (MSP-1), MSP-2, apical membrane antigen-1 (AMA-1), erythrocyte binding antigen-175 (EBA-175), rhoptry associated protein-1 (RAP-1) and gamete specific antigen, Pfg27. These epitopes were obtained at different stages of the life cycle of Plasmodium falciparum. CDC/NIIMALVAC-1 vaccine has antiparasitic activity and can used for treatment and prevention of malarial infections. Anti-CDC/NIIMALVAC-1 antibodies can be used for thetecting P. falciparum in biological samples. (Updated on 12-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Multimeric protein; interleukin 5; ILS; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 74; DB 3; Length 350; 100.0%; Pred. No. 3e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .182
3= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               343. .357
/note= "Tetanus toxoid P2 epitope"
358. .514
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human TNFalpha variant (TNF_T2) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .339
-- "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAO30491 standard; protein; 514 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2. .158
/note= "Human TNF"
159. .161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 192 QYIKANSKFIGITEL 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-NOV-2002; 2002WO-DK000764
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= '
162. .18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
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NIELSEN F S.
BRATT T.
VOLDBORG B.
MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                   Sequence 350 AA;
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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (115) and tumnour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                 New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
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                                                                                                                                  Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 74; DB 6; Length 514; 100.0%; Pred. No. 4.5e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194. .514
/note= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Tetanus toxoid P2 epitope"
                                                                                                                                Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    159. .161
/note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       319. .321
/note= "Tr1-glycine linker"
322. .336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                    Claim 23; Page 163-166; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAO30495 standard; protein; 514 AA.
                                                                                                                                  Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Human TNF"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      337. .493
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human TNFalpha variant, hTNFT_4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              162 QYIKANSKFIGITEL 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15; Conservative
                                                                                                                                  Klysner S, Nielsen FS,
              PHARMEXA AS.
KLYSNER S.
NIELSEN F S.
                                                             (BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                                               WPI; 2003-449558/42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                   N-PSDB; AAL61300
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 514 AA;
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Unidentified.
Chimeric.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
              (PHAR-)
(KLYS/)
(NIEL/)
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Region
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                                                                                                                                                                          The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNRalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and p30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                             New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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              Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 74; DB 6; Length 514; 100.0%; Pred. No. 4.5e-05; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    337. 357
/note= "Tetanus toxoid P30 epitope"
588. 514
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162. ...176
/note= "Tetanus toxoid P2 epitope"
/note= "Human TNF"
334. ..336
              Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                159. .161
/note= "Tri-glycine linker"
162. .176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human TNFalpha variant (TNF_T1) protein.
                                                                                                                                              Claim 23; Page 169-171; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAO30490 standard; protein; 514 AA.
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/note= "Human TNF"
            Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Human TNF
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16-NOV-2001; 2001US-0331575P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 100.
1es 15; Conservative
              Nielsen FS,
                                             WPI; 2003-449558/42.
                                                               N-PSDB; AAL61301
                                                                                                                                                                                                                                                                                                                                     Sequence 514 AA;
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Unidentified.
Chimeric.
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              Klysner S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAO30490;
                                                                                                                                                                                                                                                                                                                                                                      Query Match
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Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 178
                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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Gaps

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (LL5) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Bratt T, Voldborg B, Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 74; DB 6; Length 517; 100.0%; Pred. No. 4.5e-05; live 0; Mismatches 0; Indels
                                                                                                   497. .517
/note= "Tetanus toxoid P2 epitope"
322. .336
/note≈ "Tetanus toxoid P2 epitope"
                                                                                /note= "Tri-glycine linker" 497. .517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Truncated human CEA-TT P2 and P30 epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .34
/note= "signal peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 23; Page 175-177; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                   /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABR82481 standard; protein; 537 AA
                                                                                                                                                                                                                                                       16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                                       15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     322 QYIKANSKFIGITEL 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 OYIKANSKFIGITEL 15
                                                                   .496
                                 .493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                           KLYSNER S.
NIELSEN F S.
BRATT T.
                                                                                                                                                                                                                                                                                                           PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-449558/42.
N-PSDB; AAL61302.
                                                                                                                                                                                                                                                                                                                                                                    MANTA I. VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                               MOURITSEN S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 517 AA;
                                                                                                                                                       WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-2003
                                                                                                                                                                                       22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABR82481;
                                                                                                                                                                                                                                                                                                                                                         (BRAT/) I
(VOLD/) (MOUR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
Peptide
                                                                                                                                                                                                                                                                                                           PHAR-)
                                                                                                                                                                                                                                                                                                                             (KLYS/)
(NIEL/)
   Region
                                   Region
                                                                   Region
                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TWF, TWRPIDha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TMRalpha variant protein. The variant comprises 3 hTMF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                      New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 6; Length 514; llarity 100.0%; Pred. No. 4.5e-05; Conservative 0; Mismatches 0; Indele
                                                                                                                                                                                                                                                       Mouritsen
                                                                                                                                                                                                                                                     Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Tri-glycine linker"
162. .318
/note= "Human TNF"
319. .321
/note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                         Claim 23; Page 191-193; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAO30492 standard; protein; 517 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2. .158
/note= "Human TNF"
                                                                                                                                                                                                                                                     Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human TNFalpha variant protein #1.
                                            15-NOV-2002; 2002WO-DK000764.
                                                                            16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OYIKANSKFIGITEL 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .161
                                                                                                                                                                                                                                                  Nielsen FS,
                                                                                                                                            (KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
(BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                                KLYSNER S.
NIELSEN F S.
                                                                                                                                  PHARMEXA AS.
                                                                                                                                                                                                                                                                                      2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                      N-PSDB; AAL61305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
Unidentified.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-SEP-2003
                                                                                                                                                                                                                                                     s,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAO30492;
                                                                                                                                                                                                                                                    Klysner
                                                                                                                                PHAR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Region
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ð d ó

Gaps

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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                            Gene product comprises a tetanus toxin fragment, which may be expressed in a transformed host, and used as an antigen in vaccine production, against the disease. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                          its fragments contg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY92627-49 are mutant immunogenized human prostate specific membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dalum I;
                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; PSM; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mutant human PSM antigen splice variant construct, hPSM'10.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ď,
                                                                                                                                                                                                                                                                                                   100.0%; Score 74; DB 1; Length 573; 100.0%; Pred. No. 5.1e-05;
                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Leach
                                                                                                      Cloned DNA sequence coding for tetanus toxin - or it epitope used to express antigens for vaccine prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haaning J,
                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   153. .173
/label= P30
/note= "foreign epitope"
617. .631
/label= P2
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY92649 standard; protein; 693 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page; 220pp; English
                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
                                                                                                                                                         Claim 4; Fig 1; 36pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98DK-00001261.
98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-DK000525.
                                                                                                                                                                                                                                                                                                                                                                                             QYIKANSKFIGITEL 102
                                                                                                                                                                                                                                                                                                                                                                         1 QYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                 Query Match 100.
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MEBI-) M & E BIOTECH AS
                                        WPI; 1987-015999/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-349917/30.
                                                                       N-PSDB; AAN70545
                                                                                                                                                                                                                                                                  Sequence 573 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200020027-A2
                    Fairweathe NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY92649;
                                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY92649
ID AAY9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least 1 modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a truncated human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Portion of B fragment and all of the C fragment of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 74; DB 7; Length 537; 100.0%; Pred. No. 4.7e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 134-137; 140pp; English.
35. .537
/note= "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAP70345 standard; protein; 573 AA.
                                                                                                                                                        17-JAN-2002; 2002DK-00000082.
17-JAN-2002; 2002US-0350047P.
                                                                                                                       17-JAN-2003; 2003WO-DK000031
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                                            Voldborg
                                                                                                                                                                                                                                                                               WPI; 2003-587260/55.
N-PSDB; ACF35968.
                                                                                                                                                                                                             (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 537 AA;
                                                   WO2003059379-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in its sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-JUN-1986;
                                                                                                                                                                                                                                                                                                                                                                                         polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-2003
22-APR-1991
                                                                                    24-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TT; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JAN-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EP209281-A.
                                                                                                                                                                                                                                              Klysner S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAP70345;
 Protein
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cc antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-profeins), e.g. than prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8b (PGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA, and (2) at least 1 Erset T helper call group which is foreign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective A and including at least one foreign T helper epitopes are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectivelly. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187; of the specification
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; PSM; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mutant human PSM antigen splice variant construct, hPSM'6.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mouritsen S, Nielsen KG, Haaning J, Leach D, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 74; DB 3; Length 693; 100.0%; Pred. No. 6.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 153. .173
/label= P30
/note= "foreign epitope"
391. .405
/label= P2
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY92647 standard; protein; 693 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              617 QYIKANSKFIGITEL 631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-349917/30
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 693 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200020027-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92647;
                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are continuogenized forms. The method is used for inducing immune responses against weakly immunogenize cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8D (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCB) of the animal simmune system of: (1) at least 1 CTL (cytocoxic T-1ymphocyte) crossing to the animal. Analogues of human PSM, human Her2 and chind animal, murine FGF8D comprising a substantial part of all known and chast one foreign T helper splitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human CCC least one foreign T helper splitope are also claimed. The method is used to the wild type human PSM, (AAY92619), which appears on pages 184-187
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                  Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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/note= "signal peptide"
35. .708
/note= "mature protein"
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                                                                        Example 1; Page; 220pp; English.
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17-JAN-2002; 2002US-0350047P.
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 693 AA;
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ABR82479
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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least 1 modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response or virus expressing the modified CEA polypeptide to induce a CTL response or virus expressing the modified CEA polypeptide to induce a CTL response or virus expressing the suggest the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                  Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB 7; Length 708; 100.0%; Pred. No. 6.4e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Modified human CEA-TT P2 and P30 epitopes.
                                                                                                                                                      Disclosure; Page 121-124; 140pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        538 QYIKANSKFIGITEL 552
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Best Local Similarity 100.
Matches 15; Conservative
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N-PSDB; ACF35967.
              WPI; 2003-587260/55.
N-PSDB; ACF35966.
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                                                                                                                       polypeptide.
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                                                                           The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCS) in the animal of at least 1 modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
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                                                                                                                                                                                                                                                                                                                Length 713;
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100.0%; Pred. No. 6.4e-05;
iive 0; Mismatches 0;
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                                            Disclosure, Page 128-131, 140pp, English.

    .34
    /note= "signal peptide"

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17-JAN-2002; 2002US-0350047P.
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Best Local Similarity 100.
Matches 15; Conservative
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N-PSDB; ACF35964.
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                                                                                                                                                                                                                                                    in its sequence
                 polypeptide.
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Gaps

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Peptide
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carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCB) in the animal of at least I modified CEA polypeptide or of a nucrocranic animal of at least I modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is the target in inmunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        immune responses to weakly immunogenic, tumor associated peptide for the treatment of breast and prostate cancer.
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                                                                                                                                                                        Gaps
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                                                                                                                                               100.0%; Score 74; DB 7; Length 717; 100.0%; Pred. No. 6.5e-05; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                  21. .41
/label= P30
/note= "foreign epitope"
91. .105
/label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                10-AUG-2000 (first entry)
                                                                                                                                               Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                          1 OYIKANSKFIGITEL
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                                                                                                                          Sequence 717 AA;
                                                                                                    in its sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
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imune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PBM), hereagulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) croup derived from the PA and/or at least 1 D-cell group derived from the Cell-associated PA, and (2) at least 1 Erst T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human psM, FGBb and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
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preserved in the immunogenized forms. The method is used for inducing
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305. .319
/label= P2
/note= "foreign epitope"
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Gautam A, Birk P, Karlsson G;
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98US-0105011P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 750 AA;
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Synthetic.
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                  AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenic remembers. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide artigens (PAM) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8D (PGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animal simune system of: (1) at least 1 CTL (Cytotoxic T-1ymphocyte) Groeign to the animal Analogues of human PSM, human HErz and channan/murine FGP8D comprising a subsetantial part of all known and channan/murine FGP8D comprising a subsetantial part of all known and channan/murine FGP8D comprising a subsetantial part of all known and channan/murine FGP8D comprising a subsetantial part of all known and channan/murine fGP8D comprising a subsetantial part of all known and channan/murine fGP8D comprising a subsetantial part of all known and channan/murine fGP8D comprising a subsetantial part of all known and channan/murine fGP8D and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the apper file and the pages 184-187 of the appears on pages 184-187
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/label= P30
/note= "foreign epitope"
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Example 1; Page; 220pp; English
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98US-0105011P.
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/label= P2
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                   Sequence 750 AA;
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized antigenes of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are compressed in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenize cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (HBr2) and/or fibroblast growth factor 8D (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the simular system of: (1) at least 1 CTL (Cyttoxof, T-1)ymphocyte) crosinismis immune system of: (1) at least 1 B-cell group derived from the CC group derived from the PA and/or at least 1 B-cell group derived from the CC cell-associated PA, and (2) at least 1 B-cell group derived from the CC group derived from the PA and (2) at least 1 first T helper cell group which is comparising a substantial part of all known and contained crossing T helper epitopes of the respective PA and including at predicted CTL and B-cell epitopes of the respective PA and including at class prostate, prostate/breast or breast cancer when the PA is human PSM, FGP8D and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
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                                                                                                                                   Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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100.0%; Pred. No. 6.8e-05;
iive 0; Mismatches 0; Indels
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/label= P2
/note= "foreign epitope"
443. .463
/label= P30
/note= "foreign epitope"
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Birk P, Karlsson
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                                                                 WPI; 2000-349917/30.
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   Gautam A,
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Best Local 8
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Dalum I;

Leach D,

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Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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/label= P30
/note= "foreign epitope"
606. .620
/label= P2
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Best Local Similarity 100.0
Matches 15; Conservative
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Synthetic.
                        05-OCT-1998;
20-OCT-1998;
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                                                                                                                                                                       Steinaa L,
                                                                                                                                                                                                            Gautam A,
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled by the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. when the immunogenized forms. The method comprises effecting cimultaneous presentation by antigen producing cells (APCS) of the simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) controlled from the PA and (Or at least 1 B-cell group darived from the PA and (Or at least 1 B-cell group darived from the Ccll-associated PA, and (2) at least 1 Broat of all known and controlled from the animal. Analogues of human PSM, human Her2 and collected CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitopes of the respective PA and including at collectic protectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 collectication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                             Nielsen KG, Haaning J,
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                       Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
                                                                                                                                                                         99WO-DK000525.
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98US-0105011P
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                                                        WO200020027-A2
                                                                                                                                                                      05-OCT-1999;
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                                                                                                                                                                   Nielsen KG,
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                                                                                                                                                                                           Birk P, Karlsson G;
                    98DK-00001261.
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ö Gaps Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope. Mutant human prostate specific membrane antigen construct, hPSM1.1. ; 0 100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels AAY92627 standard; protein; 750 AA. 100.0%; ... 606 QYIKANSKFIGITEL 620 (first entry) Homo sapiens. Synthetic. 10-AUG-2000 AAY92627; RESULT 193 g SSXXXXXXXXXXXXXXX

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogeniz cell-associated peptide artigens (PA) such as those associated with cancers (self-proteins), e.g. thusan prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8D (FGPB). The method comprises effecting simultaneous presentation by antigen producing cells (APCB) of the simultaneous presentation by antigen producing cells (APCB) of the call ansociated PA, and (2) at least 1 B-cell group derived from the CC group derived from the PA and/or at least 1 B-cell group derived from the CC cell-associated PA, and (2) at least 1 first T helper cell group which is coreign to the animal. Analogues of the respective PA and including at the predicted CTL and B-cell epitopes of the respective PA and including at coreign one foreign The helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGFBD and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the anergister.
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                                                                                                                                     /note= "foreign epitope"
                                                                             'note= "foreign epitope"
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Gautam A, Birk P, Karlsson G;
                  location/Qualifiers
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/label= P30
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                                       17. .31
/label= P2
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Best Local Similarity 100.
Matches 15; Conservative
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                 Prostate specific membrane antigen; immunogenized construct; mutant;
                                 vaccination, cytotoxic T-lymphocyte immunity, breast cancer; prostate cancer; cell-associated peptide antigen, foreign epitope.
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100.0%; Pred. No. 6.8e-05;
tive 0; Mismatches 0; Indels
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/note= "foreign epitope"
607. .627
/label= p30
/note= "foreign epitope"
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                                                                                                                                               Location/Qualifiers
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98US-0105011P.
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Best Local Similarity 100.
Matches 15; Conservative
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20-OCT-1998;
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                                                                                           Homo sapiens
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                                                                                                        Synthetic.
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RESULT 195 AAY92638

(first entry)

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Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                    Mutant human prostate specific membrane antigen construct, hPSM3.1
AAY92638 standard; protein; 750 AA.
                                                                                                                                                                                                       Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                             (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 750 AA;
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                        10-AUG-2000
                                                                       Homo sapiens
                                                                                                                                                                                 20-OCT-1998;
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                                                                             Synthetic.
            AAY92638;
                                                                                             Peptide
                                                                                                                 Peptide
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Dalum I;

Leach D,

Nielsen KG, Haaning J,

AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immuno responses against weakly immunogenic cell-associated peptide attigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGR8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and (Or at least 1B -cell group derived from the Ccll are from the PA and (Or at least 1B -cell group derived from the Ccll are specific at least 1B -cell group derived from the animal. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at cleast one foreign T helper epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used from the wild type human PSM (AAY92619), which appears on pages 184-187 cof the specification Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer. Example 1; Page; 220pp; English WPI; 2000-349917/30.

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Gaps
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100.0%; Score 74; DB 3; Length 750; ilarity 100.0%; Pred. No. 6.8e-05; Conservative 0; Mismatches 0; Indels
                Best Local Similarity
Matches 15; Conserv
Query Match
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Dalum I;
                                                                                                          Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                             Mutant human prostate specific membrane antigen construct, hPSM8.0.
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                                                                                                                                                              location/Qualifiers
                                                  AAY92640 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                       Karlsson G;
        213 QYIKANSKFIGITEL 227
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98US-0105011P
1 QYIKANSKFIGITEL 15
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/label= P2
                                                                               (first entry)
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Gautam A, Birk P,
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                                                                AAY92640;
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213. .227 /label= P2 /note= "foreign epitope" 21. .41 /label= P30 /note= "foreign epitope" 213. .227

99WO-DK000525

98US-0105011P. 98DK-00001261

Location/Qualifiers

Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer. Example 1; Page; 220pp; English.

AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled to inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thunan prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGR8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) crowing from the PA and (Or at least 1 B-cell group darived from the pa and (Or at least 1 B-cell group which is foreign to the animal. Analogues of human PSM, human Her2 and created foreign T helper epitopes of the respective PA and including at least one foreign T helper epitopes of the respective PA and including at control foreign T helper epitopes of the respective PA and including the DSM, FGP8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 coff the specification

Sequence 750 AA;

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Key
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The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic call-associated peptide intigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor BN (FGPBA). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least I CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least I B-cell group derived from the coll and (2) at least I first helper cell group which is
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                          Gaps
                                                                                                                                                                                                                               Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
                      Indels
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/label= P30
/note= "foreign epitope"
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| label= P2
| note= "foreign epitope"
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Birk P, Karlsson G;
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98US-0105011P.
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                         15; Conservative
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            Local Similarity
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20-OCT-1998;
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Query Match
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to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGFBb and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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                                                                                                                                                                                                              100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
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/label= P2
/note= "foreign epitope"
673. .693
/label= P30
/note= "foreign epitope"
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A, Birk P, Karlsson G;
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animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) cerl-associated by and/or at least 1 B-cell group derived from the cell-associated by, and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed in the man pSM (AAV92619), which appears on pages 184-187
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Pred. No. 6.8e-05;
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Birk P, Karlsson G;
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10. 230
Abel= P30
Anote= "foreign epitope"
674. 688
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/label= P30
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic caliamed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are confirmant epitopes (PCC binding regions and cysteine residues involved in disulfide bonds are confirmant responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. numan prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the C cell-associated PA, and (2) at least 1 B-cell group which is foreign to the animal. Analogues of human PSM, human Her2 and c predicted CTL and B-cell epitopes of the respective PA and including at protected from the proper epitope are also claimed. The method is used C to treat prostate, prostate/breast or breast cancer when the PA is human C PSM, FGFBb and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 contraction.
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/label= P2
/note= "foreign epitope"
210. .230
/label= P30
/note= "foreign epitope"
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                   Example 1; Page; 220pp; English
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98US-0105011P.
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18s 15; Conservative
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Synthetic.
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20-OCT-1998;
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize and grow as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled to the immunogenized forms. The method is used for inducing immune responses against weakly immunogenize cell-associated peptide autigens (PA) such as those associated with cancers (self-proteins), e.g. autigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Harz) and/or fibroblast growth factor 8D (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the simular system of: (1) at least 1 GTL (Cytocoxic T-lymphocyte) crowing into the anial. Analogues of human PSM, human Herz and chick comprising a substantial part of all known and channal. Analogues of the respective PA and including at concert prostate. Analogues of the respective PA and including at concert prostate, prostate Abreas to a last one foreign T helper epitopes of the respective PA and including at concert prostate, prostate Abreas to arbanial subsed cube will knype human PSM, rGF8D and Herz, respectively. Note: This sequence was constructed for the wild type human PSM (AAY92619), which appears on pages 184-187 of the abreas and the pages 184-187.
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 Leach D,
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Haaning J,
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Nielsen KG,
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                                                                                                                                                     Example 1; Page; 220pp; English.
                   Gautam A, Birk P, Karlsson G;
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 Mouritsen S,
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/label= 1
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                                                       WPI; 2000-349917/30.
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Best Local Similarity
Matches 15, Conserv
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98DK-00001261

05-OCT-1998;

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Matches 15; Conserv
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     WO200020027-A2
                                                       05-OCT-1999;
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                                                       Dalum I;
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                                                       Haaning J, Leach D,
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/note= "foreign epitope"
301. 321
/label= p30
/note= "foreign epitope"
                                                      Nielsen KG,
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                                                                  Birk P, Karlsson G;
 98US-0105011P.
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Best Local Similarity 100...
Thes 15; Conservative
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                                                      Mouritsen S,
                           (MEBI-) M & E BIOTECH AS
                                                                                           WPI; 2000-349917/30.
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20-OCT-1998;
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Synthetic.
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                                                                    Gautam A,
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide autigens (PA) such as those associated with cancers (self-proteins), e.g. autigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8D (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the simular system of: (1) at least 1 Ectl group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 B-cell group which is coll-associated PA, and (2) at least 1 Eirst T helper cell group which is coreign to the animal. Analogues of human PSM, human Herz and chuman/murine FGF8D comprising a substantial part of all known and chuman/murine FGF8D comprising a substantial part of all known and chuman/murine prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8D and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
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prostate cancer; cell-associated peptide antigen; foreign epitope.
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רייידאm A, Birk P, Karlsson G;
99WO-DK000525.
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210. .230 /label= P30 /note= "foreign epitope" 448. .462 /label= P2 /note= "foreign epitope"

Location/Qualifiers

Peptide

Peptide

Homo sapiens. Synthetic.

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immuno responses against weakly immunogenic cell-associated peptide attigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGR8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 E-cell group derived from the PA and (Or at least 1 B-cell group derived from the PA and (2) at least 1 B-cell group derived from the Ccell-associated PA; and (2) at least 1 B-cell group derived from the Creign to the animal. Analogues of human PSM, human Her2 and producing at least one foreign T helper epitopes of the respective PA and including at least one foreign T helper epitopes are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, RGFBb and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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                                                                                                                                                                                                                                                                                        Haaning J, Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 74; DB 3; Length 750; 100.0%; Pred. No. 6.8e-05; ive 0; Mismatches 0; Indels
674. .688
/label= P2
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                        Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                            Birk P, Karlsson G;
                                                                                                                                                      99WO-DK000525.
                                                                                                                                                                                          98DK-00001261
98US-0105011P
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                                                                                                                                                                                                                                                                                        Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 100.
                                                                                                                                                                                                                                                  (MEBI-) M & B BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                              WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 750 AA;
                                                                            WO200020027-A2
                                                                                                                                                                                          05-OCT-1998;
20-OCT-1998;
                                                                                                                                                    05-OCT-1999;
                                                                                                                13-APR-2000
                                                                                                                                                                                                                                                                                    Steinaa L,
                                                                                                                                                                                                                                                                                                            Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
  Peptide
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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.

Dalum I;

Haaning J, Leach D,

Nielsen KG,

Birk P, Karlsson G;

WPI; 2000-349917/30.

Mouritsen S,

Steinaa L, Gautam A,

(MEBI-) M & B BIOTECH AS.

99WO-DK000525. 98DK-00001261.

35-OCT-1999; 05-OCT-1998; 20-0CT-1998;

13-APR-2000

WO200020027-A2.

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenized analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenized paperial proteins, e.g. artigens (PA) such as those associated with cancers (self-proteins), e.g. thuran prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the onimals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human/murine FGP8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at beast one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADL90427 standard; protein; 872 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  448 QYIKANSKFIGITEL 462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 OYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 750 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADL90427;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
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ID ADL9
XX
AC ADL9
XX
DT 17-J
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Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.

human prostate specific membrane antigen construct, hPSM6.3.

AAY92644 standard; protein; 750 AA.

AAY92644

10-AUG-2000 (first entry)

AAY92644;

Immune response; immunoglobulin; Ig; tetanus toxin.

Tetanus toxin protein, SEQ ID 25.

(first entry)

17-JUN-2004

Wang L, Smith D, Phillips B;

Bot A,

(ASTR-) ASTRAL INC.

WPI; 2004-295415/27.

18-SEP-2003; 2003WO-US030188. 20-SEP-2002; 2002US-0412219P. 14-MAR-2003; 2003WO-US007995.

WO2004027049-A2.

01-APR-2004.

us-09-806-703a-12.rag

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The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain clostridial neurotoxin light chain, or its fragment or variant, which is capable of neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins or essential to exceptosis; the second domain is a clostridial neurotoxin heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide compared to the solubility of the polypeptide compared to the solubility of the first command part of command on its own. The second domain lacks a functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin binds. Also described is a nucleic acid molecule encoding the single chain polypeptide described above. The single chain polypeptide as positive controls for toxin assays, as antibacterial activity, and can be used any oblypeptides can be used as positive controls for toxin assays, as contibacterial as non-toxic standards for the assessment and development of in vitro assays for detection of functional botulinum or tetanus neurotoxins the answerial impacts. The present sequence is used in the answerial as and in a second sequence is used in an encoder in the answerial samples. The present sequence is used in a necessary than the present sequence is used in a necessary than answerial and the example of the present sequence is used in the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example of the example o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.
                                                                                                                  exocytosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chaddock J, Marks P, Sutton MJ, Stancombe P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                     clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocy antibacterial; vaccine; toxin assay; clostridial toxin; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                            single chain polypeptide; clostridial neurotoxin light chain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 74; DB 8; Length 872; 100.0%; Pred. No. 8e-05; Live 0; Mismatches 0; Indels
        .
Clostridial neurotoxin amino acid sequence SEQ ID NO:145.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; SEQ ID NO 145; 588pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (HEAL-) HEALTH PROTECTION AGENCY.
                                                                                                                                                                                                                                                                                                                                                                                                                         12-SEP-2002; 2002US-00241596.
                                                                                                                                                                                                                                                                                                                                                                     12-SEP-2003; 2003WO-GB003824
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 QYIKANSKFIGITEL 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shone CC, Foster KA,
Wayne J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-270039/25.
                                                                                                                                                           botulinum; tetanus
                                                                                                                                                                                                            Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; ADL90426.
                                                                                                                                                                                                                                                                WO2004024909-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 872 AA;
                                                                                                                                                                                                                                                                                                                    25-MAR-2004
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                                                                                                                                                                                                                                                                                                  Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to a method for generating an immune response to an antigen in a patient. The method comprises administering to the patient an immunoglobulin (Ig) or its portion where the Ig has at least one peptide epitope of the antigen attached to the Ig or its portion and administering the immunoglobulin or its portion in conjunction with a RNA segment. The present sequence is an antigen sequence, used to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocytosis; antibacterial; vaccine; toxin assay; clostridial toxin; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridial neurotoxin amino acid sequence SEQ ID NO:143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 74; DB 8; I
100.0%; Pred. No. 8.1e-05;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                        Disclosure, Fig 1J; 154pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADL90425 standard; protein; 879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-SEP-2003; 2003WO-GB003824.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  390 QYIKANSKFIGITEL 404
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 OYIKANSKFIGITEL 15
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Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        botulinum; tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 875 AA;
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ADL90085 standard; protein; 875 AA.

ADL90085;

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The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain polypeptide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins essential to exceptosis; the second domain is a clostridial neurotoxin heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide compared to the solubility of the polypeptide compared to the solubility of the first domain on its own. The second domain lacks a functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors that are the natural cell surface receptors to which native clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin has a nucleic acid molecule encoding the single chain bolypeptide described above. The single chain polypeptide described above. The single chain polypeptides can be used as positive controls for toxin assays, as creagent components for the synthesis of therapeutic molecules are also useful as non-toxic standards for the assessment and development of in
                                                                                                                                                                        New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vitro assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the exemplification of the present invention.
                                         Shone CC, Foster KA, Chaddock J, Marks P, Sutton MJ, Stancombe P;
Wayne J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocy antibacterial; vaccine; toxin assay; clostridial toxin; detection;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 74; DB 8; Length 879; Best Local Similarity 100.0%; Pred. No. 8.1e-05; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridial neurotoxin amino acid sequence SEQ ID NO:147.
                                                                                                                                                                                                                                                               Claim 1; SEQ ID NO 143; 588pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADL90429 standard; protein; 887 AA.
(HEAL-) HEALTH PROTECTION AGENCY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L2-SEP-2003; 2003WO-GB003824
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JUN-2004 (first entry)
                                                                                                         2004-270039/25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          botulinum; tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridium tetani
                                                                                                                              N-PSDB; ADL90424.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 879 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2004024909-A2.
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The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain clostridial neurotoxin light and heavy chains. The single chain colorpapetide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins essential to exocytosis; the second domain is a clostridial neurotoxin heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide into a cell and/or increasing the companies of the polypeptide into a cell and/or increasing the solubility of the polypeptide compared to the solubility of the first of a clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin binds. Also described as another according the single chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptide son be used as positive controls for toxin assays, as antibacterial activity, and can be used in vaccines. The single chain collypeptides are also cases and be used as positive controls for twan assays, creagent components for the synthesis of therapeutic molecules, or for developing vaccines against clostridial toxin. The polypeptides are also viero assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the exemplification of the present invention.
                                                                                                                                                                        New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.
                                                        Stancombe P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clostridium tetani; TeNT; tetanus toxin; antibacterial; vaccine; TeNT fragment C; infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 887;
                                                        Sutton MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 74; DB B; 1 100.0%; Pred. No. 8.2e-05;
                                                        Marks P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                            Claim 1; SEQ ID NO 147; 588pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB61169 standard; protein; 1315 AA.
                                                      Chaddock J,
                  (HEAL-) HEALTH PROTECTION AGENCY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                830 OYIKANSKFIGITEL 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 OYIKANSKFIGITEL 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 15, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clostridium tetani TeNT.
                                                        Foster KA,
                                                                                                                  WPI; 2004-270039/25.
N-PSDB; ADL90428.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clostridium tetani:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 887 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-APR-2001
                                                        Shone CC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB61169;
                                                                           Wayne J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 210
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Gaps

23-JUN-2000; 2000WO-GB002428

WO200100839-A1.

04-JAN-2001.

99GB-00014861

25-JUN-1999;

12-SEP-2002; 2002US-00241596

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Sequence 1315 AA;
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New polypeptide, useful for treating infections of Clostridium tetani, comprises tetanus toxin fragment with a mutation in a loop region,.
(UNLO ) IMPERIAL COLLEGE SCI TECHNOLOGY & MED.
                                                                                                                                                                                                                                                                                                                               Disclosure, Page 39; 43pp; English.
                                                                        Sinha K;
                                                                    Fairweather NF,
```

The present sequence is given in a specification relating to a novel polypeptide comprising tetanus toxin (TeNT) fragment C or its immunogenic fragment, containing a mutation in a loop region. The mutation results in a reduction in the binding of TeNT fragment C or its immunogenic fragment to ganglicaides and primary motoneurones, and/or a reduction in the ability of TeNT fragment C or its immunogenic fragment to undergo retrograde transport. The polypeptide is useful for treating, preventing and reducing the susceptibility to Clostridium tetani infection in a human or animal, and also for producing antibodies which recognise groups within TeNT polypeptides. Antibody produced against the polypeptide is also useful for treating Clostridium tetani infection

100.0%; Score 74; DB 4; Length 1315; 100.0%; Pred. No. 0.00013; tive 0; Mismatches 0; Indels c Conservative 1 QYIKANSKFIGITEL Query Match Best Local Similarity Matches 15; Conserv ò

ADL90423' standard; protein; 1315 AA. 830 QYIKANSKFIGITEL 844 15 17-JUN-2004 (first entry) ADL90423; 셤

single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin, exocytosis; antibacterial; vaccine; toxin assay; clostridial toxin; detection; Clostridial neurotoxin amino acid sequence SEQ ID NO:141. botulinum; tetanus

Clostridium tetani.

WO2004024909-A2.

25-MAR-2004.

12-SEP-2003; 2003WO-GB003824,

(HEAL-) HEALTH PROTECTION AGENCY. 12-SEP-2002; 2002US-00241596.

Stancombe P; Chaddock J, Marks P, Sutton MJ, Shone CC, Foster KA, Wayne J;

2004-270039/25. N-PSDB; ADL90422 New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin.

Disclosure; SEQ ID NO 141; 588pp; English

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The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain polypeptide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable of cleaving one or more vesicle or plasma membrane associated proteins cessential to excoytosis; the second domain is a clostridial neurotoxin heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide compared to the solubility of the polypeptide compared to the solubility of the polypeptide compared to the solubility of the first. Comain on its own. The second domain lacks a functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the polypeptide incapable of binding to cell surface receptors that are the natural cell surface receptors to which native clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors to which native clostridial neurotoxin components for the single chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptides can be used as positive controls for toxin assays, as reagent components for the synthesis of therapeutic molecules, or for developing vaccines against clostridial toxin. The polypeptides are also vitro assays for detection of functional botulinum or tetanus neurotoxins in fordstuffs or environmental samples. The present sequence is used in the exemplification of the present invention.

Sequence 1315 AA;

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Gaps .; 0 Length 1315; 0; Indels 100.0%; Score 74; DB 8; L 100.0%; Pred. No. 0.00013; iive 0; Mismatches 0; Query Match
Best Local Similarity 100..
Best Local Similarity 100..

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Search completed: January 26, 2005, 07:08:38 Job time : 102.333 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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OM protein - protein search, using sw model

January 25, 2005, 06:04:09; Search time 18.0833 Seconds (without alignments) 111.736 Million cell updates/sec Run on:

US-09-806-703A-14

112 1 FNNFTVSFWLRVPKVSASHLE Perfect score: Sequence:

21

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

Total number of hits satisfying chosen parameters:

283416 segs, 96216763 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

1: pirl:* 2: pir2:* 3: pir3:* 4: pir4:* PIR 79:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

•		مين			SUMMAKIES	
Result No.	Score	Query Match	y h Length	DB	ar T	Description
	112	100.0	0 1315	<u> </u>	BTCLTN	tentoxilvsin (EC 3
N	62	55.4		~	S33411	botulinum neurotox
m	61	54.5	366		S48110	neurotoxin type F
4	61	54.5		7	S48109	neurotoxin type F
ហ	61	54.5			I40813	Ţ,
9	61	4.			S39791	
7	59	N	7 1296	Н	BTCLAB	bontoxilysin (EC 3
80	58	51.8			A48940	bontoxilysin (EC 3
0	58	51.8	_	~	I40631	non-proteolytic bo
10	26	50.0			S48106	neurotoxin type E
11	99	0			JH0256	botulinum neurotox
12	26	0			S21178	botulinum neurotox
13	26	50.0	٦	N	I40645	botulinum neurotox
14	52	46.4		~	S23158	nucleocapsid prote
15	25	46.4		Н	MINVUWC	nonstructural prot
16	52	46.4			MINUUM1	nonstructural prot
17	51	45.5	5 1196		JQ1467	
18	51	45.5			S46430	botulinum neurotox
19	4.9	43.6			T33493	hypothetical prote
20	48	42.9		~	T47446	
21	48	42.9			S70582	botulinum neurotox
22	48	42.9			A49777	botulinum neurotox
23	48	42.9	_		S46431	botulinum neurotox
24	47.5	42.4	-		S11455	botulinum neurotox
52	47	42.0			F87937	protein F14B6.6 [i
56	47	42.0	0	~	T20879	hypothetical prote
27	47	42.0			B37837	probable alpha-amy
28	46	41.1	1 322		T25966	hypothetical prote
59	46	41.	1 442		I47074	gene CDS protein -

probable myb-like unknown protein Fl	progenitor toxin n	hypothetical prote	hypothetical prote	conserved hypothet	enterochelin ester	spheroidene monoox	probable membrane	hypothetical prote	hypothetical prote	hypothetical prote	hypothetical prote	hypothetical prote	hypothetical prote
F38197 C96668	A47708	T41362	T39081	A82470	AD0574	S04401	D64943	B99945	E85793	A90711	E85561	T20858	F83884
	٠.,						Ω	ш	щ	•			
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496 2 7 753 2 (0,0	9 (7	886 2	209 2	404 2	~	~	7	~	7	381 2	514 2	781 2
0 0	1162 2	528 2				591 2	152 2	152 2	152 2	381 2			
41.1 496 2 41.1 753 2	1162 2	40.2 528 2	40.2	39.3	39.3	39.3 591 2	38.4 152 2	38.4 152 2	38.4 152 2	38.4 381 2	38.4	38.4	38.4

ALIGNMENTS

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tentoxilysin (EC 3.4.24.68) precursor - Clostridium tetani
NyAlternate names: tetanus neurotoxin
CiSpecies: Clostridium tetani
CjDate: 31-Mar-1988 #sequence revision 31-Mar-1988 #text change 09-Jul-2004
CjAccession: A25689; A25757; A25194; B25194; A60759; S69348; S09364
CjAccession: A25689; A25757; A25194; B25194; A60759; S69348; S09364
R;Eisel, U.; Jarausch, W.; Goretzki, K.; Henschen, A.; Engels, J.; Weller, U.; Hudel, M
Files J. 2495-2502, 1986
A;Title: Tetanus toxin: primary structure, expression in E. coli, and homology with bot A;Reference number: A25689; MUID:87053814; PMID:3536478

A; Molecule type: DNA A; Residues: 1-1115 <ELSA A; Cross-reternees: UNIPROT: P04958; GB:X04436; NID:g40769; PIDN:CAA28033.1; PID:g40770 A; Cross-reternees: UNIPROT: P04958; V.A. Nucleic Acids Res. 14, 7809-7812, 1986 A; Title: The complete nucleotide sequence of tetanus toxin. A; Reference number: A25757; MUID:87040747; PMID:3774547

A; Molecule type: DNA A; May S, May S

A;Accession: A25194
A;Molecule type: DNA
A;Residues: 743-1315 <FA2>
A;Cross-references: GB:M12739; NID:g144920; PIDN:AAA23282.1; PID:g144921
A;Accession: B25194

A;Molecule type: protein

A;Meadudes: 865-894 <RAP.

R;Residues: 865-894 <RAP.

R;Meteuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T.

Infect. Immun. 57, 3588-3593, 1989

A;Title: Isolation, purification, and characterization of fragment B, the NH-2-terminal A;Reference number: A60759; MUID:90035436; PMID:2478476

A;Accession: A60759

A; Molecule type: protein
A; Residues: 461-475 < kMar>
A; Residues: 461-475 < kMar>
B; Demotz, S.; Lanzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G.
J. Immunol. 142, 394-402, 1989
A; Title: Delineation of several DR-restricted tetanus toxin T cell epitopes.
A; Reference number: USO098; MUID: 89093318; PMID: 2463305
A; Contents: annotation; epitope region
B; Schlavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta, B.
Nature 359, 832-835, 1992
A; Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteoly A; Reference number: S71125; MUID: 93063293; PMID: 1331807
A; Contents: annotation

Gaps

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1; Indels

5; Mismatches

Score 61; DB 2; Length 366 Pred. No. 0.032;

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A;Cross-references: UNIPROT:Q57236; EMBL:X70821; NID:g407792; PIDN:CAA50152.1; PID:g407.
C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A)Status: preliminary; nucleic acid sequence not shown; translation not shown A; Molecule type: DNA A; Molecule type: DNA A; Residues: 1-369 < CAM> A; Residues: 1-369 < CAM> A; Cross-references: UNIPROT: P30996; EMBL: X70820; NID: 9407790; PIDN: CAAS0151.1; A; Note: the nucleotide sequence was submitted to the EMBL Data Library, Januar C; Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurotoxin type F - Clostridium botulinum (fragment)
C;Species: Clostridium botulinum
C;Species: 12-Peb-1998 #sequence_revision 20-Feb-1998 #text_change 09-Jul-2004
C;Accession: 848109
R;Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and A;Reference number: S48103; MUID:94013372; PMID:8408542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54.5%; Score 61; DB 2; Length 369; ilarity 57.1%; Pred. No. 0.032; Conservative 5; Mismatches 1; Indels
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57.1%;
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297 YQNFSISFWVRIPK 310
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297 YQNFSISFWVRIPK 310
                                                                                                                                                                                                                                                                                                                         1 FNNFTVSFWLRVPK 14
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                                                                                                                                                       Query Match
Best Local Similarity 57.1-
8, Conservative
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nes 8; Conserv
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                        A; Residues:
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                                                                                                                                                       A, Molecule type: protein
A, Residues: 2-31 cDEP-
C, Comment: The source of this protein was an extrachromosomal plasmid.
C, Comment: The source of this protein was an extrachromosomal plasmid.
C, Comment: The precursor is cleaved by endogenous proteinase activity to form light (fradual chains are not toxic when separated). The amino end of the heavy chain (fragment B) C, Comment: Fragment B forms ion channels in a lighid bilayer. Fragment C binds to ganglic C, Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteolytic cleavage of sy
                                                                                                                                                                                                                                                                                                                                                                                                                          C, Function:
A;Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
C;Superfamily: tetanus toxin
C;Superfamily: tetanus toxin
C;Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
C;Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
F;2-457/Product: tentoxylysin light chain (fragment B) #status predicted <TTL>
F;461-1315/Product: tentoxylysin heavy chain (fragment B.C) #status experimental <TTH>
F;461-1315/Domain: channel forming (fragment B) #status predicted <TXC>
F;865-1315/Domain: ganglioside binding (fragment C) #status predicted <TXC>
F;233,237/Binding site: zinc (Hig) #status predicted
F;234/Active site: Glu #status predicted
Ride Filippis, V.; Vangelista, L.; Schiavo, G.; Tonello, F.; Montecucco, C.
Eur. J. Biochem. 229, 61-69, 1995
A;Title: Structural studies on the zinc-endopeptidase light chain of tetanus neurotoxin.
A;Reference number: S69348; MUID:95262688; PMID:7744050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            botulinum neurotoxin type F - Clostridium barati

G/Species: Clostridium barati

G/Species: Clostridium barati

G/Accession: 333411, 531860

R/Thompson, D.E., Hutson, R.A.; East, A.K.; Allaway, D.; Collins, M.D.; Richardson, P.T.

R/Thompson, D.E., Hutson, R.A.; 1983

A/TICHEN Microbiol. Lett. 108, 175-182, 1993

A/TICHEN Nucleotide sequence of the gene coding for Clostridium barati type F neurotoxin

A/Accession: S33411

A/Accession: S33411

A/Accession: S3411

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A;Cross-references: UNIPROT:Q45851; EMBL:X68262; NID:g49138; PIDN:CAA48329.1; PID:g49139
C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
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() Species: Clostridium botulinum

() Species: Clostridium botulinum

() Species: Clostridium botulinum

() Sacession: 84810

() Accession: 84810

() Clins, M. 225-2262, 1933

() Clin. Microbiol. 31, 225-2262, 1933

() A. Tile: Gene probes for identification of the botulinal neurotoxin gene and specific in A. A. A. A. C. Session: 84810

A. A. A. C. Session: 84810

A. A. C. Session: 84810

A. A. C. Session: 84810

A. A. C. Session: 84810

A. A. C. Session: 84810

A. A. C. Session: 84810

A. A. C. Session: 84810
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Pred. No. 0.082;
4; Mismatches 1; Indels
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Pred. No. 4.7e-10;
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100.0%; Pred. No. *...
0; Mismatches
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922 YQNFSVSFWVRIPK 935
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specific id

EMBL:X70820; NID:g407790; PIDN:CAA50151.1; PID:g407, submitted to the EMBL Data Library, January 1993

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T.A.; Thompson,
neurotoxin type F - Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: 1408-13; S48108
B;East, A.K.; Richardson, P.T.; Allaway, D.; Collins, M.D.; Roberts, T.A.; Thompso FEMS Microbiol. Lett. 96, 225-230, 1992
A;Title: Sequence of the gene encoding type F neurotoxin of Clostridium botulinum.
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Pred. No.
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C;Superfamily: tetanus toxin
C;Keywords: disulfide bond; hydrolase; metalloproteinase; neurotoxin; transmembrane pro
F;2-444/Product: bontoxilysin A light chain #status experimental <LGHT>
F;445-1296/Product: bontoxilysin A heavy chain #status experimental <HVY>
F;223,227/Binding site: zinc (His) #status predicted
F;224/Active site: Glu #status predicted
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A;Molecule type: DNA
A;Residues: 1-1291 <WHB>
A;Residues: 1-1291 <WHB>
A;Residues: 1-1291 <WHB>
A;Residues: 1-1291 <WHB>
A;Cross-references: UNIPROT:P10844; GB:M81186; NID:g144734; PIDN:AAA23211.1; PID:g14473
A;Cross-references: type B, Danish
A;Note: sequence extracted from NCBI backbone (NCBIN:112080, NCBIP:112081); this public
A;Note: sequence extracted from NCBI backbone (NCBIN:112080, NCBIP:112081); this public
A;Note: sequence extracted from NCBI backbone (NCBIN:112080, NCBIP:112081); this public
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NyAlternate names: botulinum neurotoxin type B (BoNT/B)
Syspecies: Clostridium botulinum
C;Species: 10-Dec-1993 #sequence revision 18-Nov-1994 #text change 09-Jul-2004
C;Accession: A48940; S48105; $21575; A42871; S07155; S08562; S07128; S08573; S08574
R;Whelan, S.M.; Elmore, M.J.; Bodeworth, N.J.; Brehm, J.K.; Atkinson, T.; Minton, N.P. Appl. Environ. Microbiol. 58, 2345-2354, 1992
A;Title: Molecular cloning of the Clostridium botulinum structural gene encoding the ty A;Reference number: A48940; MUID:92384550; PMID:1514783
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A,Reafdues: 2-47 cABA2
A,Reafdues: 2-47 cABA2
E,Binz, T.; Blasi, J.; Yamasaki, S.; Baumeister, A.; Link, E.; Suedhof,
J. Biol. Chem. 269, 1617-1620, 1994
A,Fitele: Proteolysis of SNAP-25 by types E and A botulinal neurotoxins.
A,Reference number: A49708; MUID:94124495; PMID:8294407
A,Contents: annotation
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Pred. No. 0.26;
4; Mismatches 2; Indels
           R,Gimenez, J.A.; DasGupta, B.R.
J. Protein Chem. 12, 351-363, 1993
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Best Local Similarity 57.1%;
Matches 8; Conservative
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938 YENFSTSFWIRIPK 951
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A; Accession: A27000
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C;Function:
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A; Cross-references: UNIPROT: P10845; GB:M30196; NID:g144864; PIDN:AAA23262.1; PID:g144865
A; Experimental source: strain 62A, subtype A
A; Experimental source: strain 62A, subtype A
B; Thompson, D.E.; Brehn, J.K.; Oultram, J.D.; Swinfield, T.J.; Shone, C.C.; Atkinson, T. Bur. J. Biochem. 189, 73-81, 1990
A; Title: The complete amino acid sequence of the Clostridium botulinum type A neurotoxin A; Reference number: S09492; MUID:90235864; PMID:2185020
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Jochem. Biophys. Res. Commun. 162, 1388-1395, 1989
Title: Characterization of botulinum type A neurotoxin gene: delineation of the N-term
Reference number: A33401; MUID:89350959; PMID:2669749
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NyAlternate names: botulinum neurotoxin type A
CiSpecies: Clostridium botulinum
CiSpecies: Clostridium botulinum
CiSpecies: 31-Mar-1993 #sequence revision 31-Mar-1993 #text change 09-Jul-2004
CiAccession: A35294, S09492; S68220; A33401, A53884; A60025; A27000
Ribinz, T.; Kurazono, H.; Wille, M.; Frevert, J.; Wernars, K.; Niemann, H.
J. Biol. Chem. 265, 9153-9158, 1990
A; Reference number: A35294; MulD:90264400; PMID:2160960
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C;Species: Clostridium botulinum
C;Cpate: O'-Oct-1994 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
C;Accession: 839791
R;Campbell, K.; Collins, M.D.; East, A.K.
Biochim. Biophys. Acta 1216, 487-491, 1993
A;Atitle: Nuclectide sequence of the gene coding for Clostridium botulinum (Clostridium A;Reference number: 839791; MUID:94092745; PMID:8268233
A;Accession: 839791
A;Status: preliminary
A;Accession: 1297
A;Accession: 239791
A;Residues: 1-1297
C;Acam>A;Cross-references: EMBL:X74162; NID:9441275; PIDN:CAA52275.1; PID:9441276
C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
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C;Species: Clostridium botulinum
C;Date: 07-Oct-1994 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
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A; Residues: 1, 'Q', 3-26,'V', 28-1296 < THO>
A; Cross-references: EMBL: X52066; NID: g40381; PIDN: CAA36289.1; PID: g40382
A; Experimental source: NCTC 2916
R; Pujita, R.; Pujinaga, Y.; Inoue, K.; Nakajima, H.; Kumon, H.; Oguma, K.
FEBS Lett. 376, 41-44, 1995
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A;Molecule type: DNA
A;Residues: 1-35 <BET>
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A; Residues: 1-12 <FUJ>
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C; Species: Clostridium botulinum
C; Species: Clostridium botulinum
C; Date: 12-Aug-1996 #sequence revision 12-Aug-1996 #text_change 09-Jul-2004
C; Date: 12-Aug-1996 #sequence revision 12-Aug-1996 #text_change 09-Jul-2004
C; Accession: 140631; 848103; 848104; 836015
R; Hutson, R.A.; Collins, M.D.; East, A.K.; Thompson, D.E.
Aurr: Microbiol. 28, 101-110, 1994
A.Title: Nuclectide sequence of the gene coding for non-proteolytic Clostridium botulinum A; Reference number: 140631; MUID: 94122659; PMID: 7764370
A, Accession: 140631
A, Multiple: DNA
A, Status: preliminary; translated from GB/EMBL/DDBJ
A, Residues: 1-1291 -RESS
A, Forence: UNIPRO: M.D.; East, A.K.
J, Corpse-references: UNIPRO: M.D.; East, A.K.
J, Clin. Microbiol. 31, 2255-2262, 1993
A, Accession: Gene probes for identification of the botulinal neurotoxin gene and specific in A, Accession: 548103; MUID: 94013372; PMID: 8408842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neurocoxin type B - Clostridium botulinum (fragment)
C,Species: Clostridium botulinum
C,Species: 4-Unl-1995 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C,Accession: 848106
R;Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A,Title: Gene probes for identification of the botulinal neurotoxin gene and specific id A,Reference number: 848103; MUID:94013372; PMID:8408842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA A;Residues: 1-367 < CAM>. A;Residues: 1-367 < CAM>. A;Residues: 1-367 < CAM>. A;Cross-references: UNIPROT:Q45861; EMBL:X70818; NID:g407784; PIDN:CAA50149.1; PID:g4077781; A;Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1993 C;Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A.Molecule type: DNA' A.Molecule type: DNA' A.Molecule type: DNA' A.Molecule type: DNA' A.Molecule type: 0493, T', 845, N', 847-994 <CAM2>
A.Molecules: 634-843, T', 845, N', 847-994 <CAM2>
A.Molecules: EMBL:X70819; NID:9407780; PIDN:CAA50150, 1; PID:9407781
A.Experimental source: non-proteolytic strain Eklund 2B (Colworth 229)
C.Comment: Botulinum neurotoxin type B in these strains may posses a capable catalytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A Status: preliminary; nucleic acid sequence not shown; translation not shown A; Molecule type: DNA A; Molecule type: DNA A; Molecule type: DNA A; Molecule type: DNA B, 761, 18, 763-841, 18, 843, 17, 845, 18, 1847-994 < CAMI> A; Cross-references EMBL: X70814; NID:9407779; PIDN:CAASO145.1; PID:9407779 A; Experimental source: non-proteolytic strain 21298 (Scott) A; Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Superfamily: tetanus toxin
C; Superfamily: tetanus toxin
C; Keywords: metalloprotein; neurotoxin; transmembrane protein; zinc
F;2-441/Product: botulinum neurotoxin type B light chain #status predicted <LGHT>
F;442-1291/Product: botulinum neurotoxin type B heavy chain #status predicted <HVY>
F;230,234/Binding site: zinc (His) #status predicted
F;231/Active site: Glu #status predicted
                                                                                                                                                                                       non-proteolytic botulinum neurotoxin type B precursor - Clostridium botulinum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
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Pred. No. 0.38;
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FLDFSVSFWIRIPK 936
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: S48104
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A; Status: preliminary
A; Molecule type: procein
A; Residues: 2-16 < SCH1>
A; Residues: 2-16 < SCH1>
A; Residues: 2-17 < SCH1>
A; Residues: 2-17 < SCH1>
A; Residues: 2-17 < SCH1>
A; Residues: 2-17 < SCH1>
A; Residues: 2-17 < SCH1>
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A; Residues: 2-17 < SCH1>
A; Residues: 2-17 < SCH1>
A; Residues: 2-18 < SCH1>
A; Residues: 2-18 < SCH1>
A; Residues: 2-18 < SCH1>
A; Residues: 2-18 < SCH1>
A; Residues: 442-459 < SCH1>
A; Residues: 442-459 < SCH1>
A; Residues: 452-459 < SCH1>
A; Residues: 452-459 < SCH1>
A; Residues: 452-459 < SCH1>
A; Residues: 452-459 < SCH1>
A; Residues: 452-459 < SCH1>
A; Residues: 452-459 < SCH1>
A; Reference number: S27125; MUID:93063293; PMID:1331807
A; Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release from cholinergic synap C; Comment: Boundarion
C; Comment: Boundarion
C; Comment: Boundarion
C; Comment: Boundarion
C; Comment: Boundarion
C; Reywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc C; Superfamily: tetanus toxin
C; Reywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc C; Superfamily: tetanus toxin
C; Reywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc C; Superfamily: tetanus toxin B iight chain #status experimental cHVY>
F; 220, 234/Binding site: zinc (His) #status predicted
F; 231/Active site: Glu #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A, Sceesion: A42871
A, Status: nucleic acid sequence not shown
A, Mesiques: 1-313, 'S', 315-451 «KUR»
A, Resiques: 1-313, 'S', 315-451 «KUR»
A, Resiques: 1-313, 'S', 315-451 «KUR»
A, Resiques: 1-313, 'S', 315-451 «KUR»
A, Note: sequence extracted from NCBI backbone (NCBIP:109365)
R, DasGupta, B.R.; Datta, A.
Biochimie 70, 811-817, 1988
A, Title: Botulinum neurotoxin type B (strain 657): partial sequence and similarity with
A, Recession: S07155; MUID:89000987; PMID:3139097
A, Rocession: S07155
A, Molecule type: protein
A, Rocession: S08652
A, Molecule type: protein
A, Rocession: S08652
A, Molecule type: protein
A, Rocession: S08654
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A Molecule type: DNA
A, Residues: 634-994 cCAM>
A, Residues: 634-994 cCAM>
A, Residues: 634-994 cCAM>
A, Cross-references: EMBL:X70817; NID:9407782; PIDN:CAA50148.1; PID:9407783
A, Experimental source: proteolytic type B, strain NCTC 7273
A, Experimental source: proteolytic type B, strain NCTC 7273
B, Szabo, E.A.; Pemberton, J.M.; Desmarchelier, P.M.
A; Szabo, E.A.; Pemberton a Library, April 1992
A; Reference number: S21575
A; Reference number: S21575
A; Reference number: S21575
A; Reference number: BNA
A; Reference number: BNA
A; Residues: 36-217, G', 219-224, S', 226-246 <S2A>
A; Residues: 36-217, G', 219-224, S', 226-246 <S2A>
A; Residues: 36-217, G', 219-224, S', 226-246 <S2A>
A; Residues: 36-217, G', 219-224, S', 226-246 <S2A>
A; Residues: 36-217, G', 219-224, S', 226-246 <S2A>
A; Residues: 36-217, G', 219-224, S', 226-246 <S2A>
A; Runarono, H:, Mochida, S.; Binz, T.; Eisel, U.; Quanz, M.; Grebenstein, O.; Wernars, N.
A; Ritle: Minimal essential domains specifying toxicity of the light chains of tetanus to
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Pred. No. 0.38;
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64.3%;
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Best Local Similarity
Matches 9; Conserv
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Gaps

Length 367;

DB 2;

50.0%; Score 56;

C; Keywords: neurotoxin

Query Match

| :|:||||:||| 923 FLDFSVSFWIRIPK 936 1 FNNFTVSFWLRVPK 14

typ

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A; Molecule type: protein.
A; Residues: 420-427 < Climb.
A; Residues: 420-427 < Climb.
A; Residues: 420-427 < Climb.
A; Roberimental source: strain Beluga
A; Note: this fragment was generated by proteolysis with Lys-C rather than with trypsin C; Comment: The oldstridial neurotoxins are highly potent protein toxins that inhibit net C; Comment: The heavy chain mediates the binding of toxin to cell receptors while the lic C; Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of Clostridium botulinum type A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
A; Reprimental source: strain Beluga
A; Experimental source: strain Beluga
B; Squenez, J.A.; DasGupta, B.R.
Biochimie 72, 213-217, 1990
A; Title: Botulinum neurocoxin type E fragmented with endoproteinase Lys-C reveals the A; A: Reference number: A60027; MUID:90344918; PMID:2116911
A; Cross-references: EMBL:X70815; NID:g407786; PIDN:CAA50146.1; PID:g407787
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1993
R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R.
Biochem. Biophys. Res. Commun. 183, 107-113, 1992
A; Title: Sequences of the botulinal neurotoxin E derived from Clostridium botulinum t
A; Reference number: JH0256; MUID:92181428; PMID:1543481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Keywords: neurotoxin
F;1-422/Product: botulinum neurotoxin type E light chain #status predicted <LCH>
F;423-1253/Product: botulinum neurotoxin type E heavy chain #status predicted <HCH>
F;412-426/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       botulinum neurotoxin type A - Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Accession: 140645
R;Willems, A.; East, A.K.; Lawson, P.A.; Collins, M.D.
Res. Microbiol. 144, 547-556, 1993
A;Title: Sequence of the gene coding for the neurotoxin of Clostridium botul
A;Reference number: I40645; MUID:94143603; PMID:8310180
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A;Molecule type: DNA
A;Residues: 1-1296 <RES>
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Pred. No. 0.79;
5; Mismatches
                                                                                                                                                                                                                                                                A;Status: nucleic acid sequence not shown
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Similarity 53.8%;
7; Conservative
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938 YENFSTSFWIKIPK 951
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912 YKNFSISFWVRIP 924
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                        C;Species: Clostridium butyricum
C;Date: 30-Jun-1992 #sequence_revision 15-May-1998 #text_change 09-Jul-2004
C;Date: 30-Jun-1992 #sequence_revision 15-May-1998 #text_change 09-Jul-2004
C;Accession: Jul0255, 515145
R;Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R.
Biochem. Biophys. Res. Commun. 183, 107-113, 1992
A;Title: Sequence of the botulinal neurotoxin E derived from Clostridium botulinum type
A;Reference number: JH0256
A;Status: nucleic acid sequence not shown
A;Residues: UN0256
A;Status: nucleic acid sequence not shown
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 29-151 <POUJ
A;Residues: 1-27, E; 1991
A;Title: Cloning of a DNA fragment encoding the 5'-terminus of the botulinum type E toxi
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A, Residuals: 1-1252 cWHE>
A, Residuals: 1-1252 cWHE>
A, Cross-references: UNIPROT: Q000496; UNIPROT: Q45862; EMBL: X62683; NID: g40397; PIDN: CAA445
R) Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A) Title: Gene probes for identification of the botulinal neurotoxin gene and specific id
A, Reference number: 848103; MUID: 94013372; PMID: 8408542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A, Experimental source: strain BL6340
C, Comment: The clostridial neurotoxins are toxins that inhibit neurotransmitter release
C, Comment: The heavy chain mediates the binding of toxin to cell receptors while the lig
C, Superfamily: tetanus toxin
C, Keywords: neurotoxin
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C; Species: 30-69-1993 #sequence revision 30-8ep-1993 #text change 09-Jul-2004
C; Dates: 30-69-1993 #sequence revision 30-8ep-1993 #text change 09-Jul-2004
C; Accession: S11.78; S48107; JH057; B35294; A60027; S18111
R; Whelan, S.M.; Elmore, M.J.; Bodsworth, N.J.; Atkinson, T.; Minton, N.P.
Bur. J. Blochem. 204, 657-667, 1992
A; Title: The complete amino acid sequence of the Clostridium botulinum type-E
A; Reference number: S21178; MUID:92174922; PMID:1541280
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A,Residues: 616-982 <CAM>
                                                                                     Gaps
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;Cross_references: EMBL:X53180; NID:940407; PIDN:CAA37321.1; PID:940408
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Pred. No.
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                                                  53.8%;
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297 YKNFSISFWVRIP 309
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YKNFSISFWVRIP 924
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                                                                               Conservative
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nes 7; Conservative
                                                  Best Local Similarity
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Length 467; Indels

NS

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Coxin, nontoxic component - Clostridium botulinum phage (type C)
C;Species: Clostridium botulinum phage
C;Species: Clostridium botulinum phage
C;Species: Clostridium botulinum phage
C;Species: Clostridium botulinum phage
C;Species: T-Jul-1992 #sequence revision 17-Jul-1992 #text_change 02-Jun-2003
C;Accession: J01467; P02029; $22165
R;Tsuzuki, K.; Kimura, K.; Fujii, N.; Yokosawa, N.; Oguma, K.
Biochem. Biophys. Res. Commun. 183, 1273-1279, 1992
A;Title: The complete nucleotide sequence of the gene coding for the nontoxic-nonhemaggl.
A;Reference number: J01467; MUID:92231894; PMID:1567404
A;Accession: J01467
A;Accession: J01467
A;Residues: 1-1196 <TSU>A;Accession: Commun. A;Accession: Commun. A;Accession: Commun. A;Accession: Commun. A;Accession: Commun. A;Accession: Commun. A;Accession: Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. Commun. 
                                                                 A;Gene: NS
A;Map position: segment S
C;Superfamily: tomato spotted wilt virus nonstructural protein ]
C;Keywords: nonstructural protein
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Pred. No. 1.3;
3; Mismatches
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80.0%;
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Similarity 64.3%;
9; Conservative
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Best Local Similarity 80.vv,
8; Conservative
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C;Genetics
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C;Species: tomato spotted wilt virus
C;Species: tomato spotted wilt virus
C;Species: tomato spotted wilt virus
C;Species: tomato spotted wilt virus
C;Accession: J00547
R;de Haan, P; Wagemakers, L; Peters, D; Goldbach, R.
J; Gen. Virol. 71, 1001-1007, 1990
A;Title: The S RNA segment of tomato spotted wilt virus has an ambisense character.
A;Reference number: J00547, MUID:90264829; PMID:1693160
A;Reference number: J00547, MUID:90264829; PMID:1693160
A;Residues: 1-464 <DEH>
A;Molecule type: genomic RNA
A;Residues: 1-464 <DEH>
A;Residues: 1-464 <DEH>
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A;Generic
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C;Species: Impatiens necrotic spot virus
C;Date: 22-Nov-1993 #sequence_revision 01-Dec-1995 #text_change 09-Jul-2004
C;Accession: 23158
R;de Haan, P:; de Avila, A.C.; Kormelink, R.; Westerbroek, A.; Gielen, J.J.L.; Peters, D
FEBS Lett. 306, 27-32, 1992
A;Title: The nucleotide sequence of the S RNA of Impatiens necrotic spot virus, a novel
A;Reference number: S23158; MUD:92331780; PMID:1385787
A;Accession: S23158
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C;Species: tomato spotted wilt virus
C;Species: tomato spotted wilt virus
C;Species: tomato spotted wilt virus
C;Accession: 30.58p-1992 #sequence_revision 30-Sep-1992 #text_change 09-Jul-2004
C;Accession: J00554
R;Maiss, E.; Ivanova, L.; Breyel, E.; Adam, G.
R;Maiss, E.; Ivanova, L.; Breyel, E.; Adam, G.
A;Description: Cloning and sequencing of the S RNA from a Bulganan isolate of tomato spc
A;Reference number: J00554
A;Accession: J00554
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46.4%; Score 52; DB 2; Length 449;
Best Local Similarity 45.0%; Pred. No. 1.2;
Matches 9; Conservative 5; Mismatches 4; Indels
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64.3%; Pred. No. 1.3;
cive 3; Mismatches
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Matches 9; Conservative
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A;Accession: Pp0297
A;Molecule type: protein
A;Molecule type: protein
C;Comment: 1-16 OrTS2-
C;Comment: This nontoxic component is a constituent of 168(500K) toxin with two other cc C;Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dotulinum neurotoxin-associated protein ANTP-139 - Clostridium botulinum phage 1C (strain NyAlternate names: ANTP-139 protein C;Species Clostridium botulinum phage 1C (species Clostridium botulinum phage 1C A;Variety: strain C 468 C;Date: 19-Mar-1997 #sequence_revision 06-Jun-1997 #text_change 09-Jul-2004 C;Accession: 846430; 849106 MW: Boquet, P:; Popoff, M.R. Mol. Gen. Genet. 243, 631-640, 1994 A;Title: Organization of the botulinum neurotoxin C1 gene and its associated non-toxic I A;Reference number: 846426; MUID:94301293; PMID:8028579 A;Accession: 846430 A;Status; nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Residues: 1-1196 <HAU>
A;Cross-references: UNIPROT:038197; EMBL:X72793; NID:g516171; PIDN:CAA51312.1; PID:g5161
A;Experimental source: strain C 468
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, May 1993
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                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                              Score 51; DB 2;
Pred. No. 5;
1; Mismatches
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80.0%; Pred. No. 5;
ive 1; Mismatches
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A; Residues: 1-1285 <-MOR>
A; Residues: 1-1285 <-MOR>
A; Cross-references: EMBL:D38442; NID:g1374775; PIDN:BAA07477.1; PID:g1374776
A; Cross-references: EMBL:D38442; NID:g1374775; PIDN:BAA07477.1; PID:g1374776
C; Comment: The clostridial neurotoxins are highly potent protein toxins that inhibit neurolifide bond. The heavy chain mediates the binding of toxin to the presynaptic memb C; Superfamily: tetanus toxin c; Reywords: disulfide bond; neurotoxin; transmembrane protein
C; Reywords disulfide bond; neurotoxin; transmembrane protein
F;1-447/Product: botulinum neurotoxin type Dsa light chain #status predicted <-MATI>-
F;448-1285/Product: botulinum neurotoxin type Dsa heavy chain #status predicted <-MATI>-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-669, K', 671-1291 (TS1>
A; Residues: 1-669, K', 671-1291 (TS1>
A; Residues: 1-669, K', 671-1291 (TS1>
A; Residues: 1-669, K', 671-1291 (TS1>
B; Tsuzuki, K.; Kimura, K.; Fujii, N.; Yokosawa, N.; Oguma, K.
Bubmitted to the EMBL Data library, December 1991
A; Description: Nucleotide sequence of the gene for one of the components of hemagglutin
A; Reference number: S22163
A; Reference number: S22166
A; Residues: Perliminary
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-1291 (TS2>
A; Residues: 1-1291 (TS2>
A; Fujii, N.; Tsuzuki, K.; Murakami, T.; Indoh, T.; Yokosawa, N.; Oguma, K.
A; Minura, K.; Fujii, N.; Tsuzuki, K.; Murakami, T.; Indoh, T.; Yokosawa, N.; Oguma, K.
A; Title: Cloning of the structural gene for Clostridium botulinum type C-1 toxin and wh.
A; Reference number: A49777; MUID: 91282468; PMID: 2059039
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Pred. No. 17;
6; Mismatches 2; Indels
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Pred. No. 17;
6; Mismatches
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Best Local Similarity 42.9%;
Matches 6; Conservative
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Best Local Similarity 42.9%;
Matches 6; Conservative
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935 YESPSISFWIRINK 948
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C;Superfamily: tetanus toxin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein T18B22.110 - Arabidopsis thaliana
C; Species: Arabidopsis thaliana (mouse-ear cress)
C; Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 09-Jul-2004
C; Accession: T47446
R; Jordan, N.; Bangert, S.; Wiedelmann, R.; Voss, H.; Unseld, M.; Mewes, H.W.; Lemcke, K. submitted to the Protein Sequence Database, Pebruary 2000
A; Reference number: Z24467
A; Accession: T47446
A; Status: preliminary
A; Molecula ....
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R;Moriishi, K.; Koura, M.; Abe, N.; Fujii, N.; Fujinaga, Y.; Inoue, K.; Ogumad, K.
Biochim. Biophys. Acta 1307, 123-126, 1996
A;Title: Mosaic structures of neurotoxins produced from Clostridium botulinum types C an A;Reference number: S70582; MUID:96283801; PMID:8679691
                                                                                                                                                                                                                                                                                             A;Accession: T33493
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-276 <GAT>
A;Cross-references: UNIPROT:O9TZKS; EMBL:AF098987; PIDN:AAC67432.1; GSPDB:GN00020; CESP:A;Experimental source: strain Bristol N2; clone F40H3
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                              hypothetical protein F40H3.5 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 09-Jul-2004
C;Accession: T33493
R;Gattung, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             botulinum neurotoxin type Dsa precursor - Clostridium botulinum phage d-sA C; Species: Clostridium botulinum phage d-sA A; Note: host Clostridium botulinum type D (strain South Africa) C; Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
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A;Residues: 1-504 <JOR>
A;Residues: 1-504 <JOR>
A;Cross-references: UNIPROT: Q9MIN3; EMBL:AL138652
A;Experimental source: cultivar Columbia; BAC clone T18B22 CGenetics:
A;Map position: 3
A;Note: T18B22.110
                                                                                                                                                                                      Rigattung, S. submitted to the EMBL Data Library, October 1998 submitted to the EMBL Data Library, October 1998 A;Description: The sequence of C. elegans cosmid F40H3. A;Reference number: Z21358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43.8%; Score 49; DB 2; 42.9%; Pred. No. 2.3;
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Pred. No. 6.3;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A,Gene: CESP:F40H3.5
A,Map position: 2
A,Introns: 49/2; 109/3; 154/3; 227/3; 271/1
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A; Status: nucleic acid sequence not shown
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ilarity 41.7%;
Conservative
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Best Local Similarity
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Best Local Similarity
Local 10; Conserve
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Search completed: January 25, 2005, 06:09:23
Job time : 19.0833 secs
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A; Residues: 1-1291 <HAU>
A; Residues: 1-1291 <HAU>
A; Cross-references: UNIPROT: 093HT3; EMBL: X72793; NID: 9516171; PIDN: CAA51313.1; PID: 95161
A; Experimental source: strain C 468
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, May 1993
C; Superfamily: tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Doculinum neurotoxin type D - Clostridium botulinum
C;Species: 18-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S11455
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
R;Binz, T.; Kurazono, H.; Popoff, M.R.; Eklund, M.W.; Sakaguchi, G.; Kozaki, S.; Kriegle
A;File: Nucleotide sequence of the gene encoding Clostridium botulinum neurotoxin type
A;Fictus: preliminary; Lanslation not shown
A;Status: preliminary; translation not shown
A;Residues: 1-1276 < MINS
A;Residues: 1-1276 < MINS
CFOSSE-references: UNIPROT:P19321; EMBL:XS4254; NID:g40395; PIDN:CAA38175.1; PID:g40396
C;Superfamily: tetanus toxin
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CiAccession: P87937
CiAccession: P87937
CiAccession: P87937
CiAccession: P87937
A:Title: Genome sequence of the nematode C. elegans: a platform for investigating biolog A:Title: Genome sequence of the nematode C. elegans: a platform for investigating biolog A:Title: Genome sequence of the nematode C. elegans/ and www.sanger.ac.uk/Projects/C_ele A:Note: see websites genome.wustl.edu/gsc/C_elegans/ and www.sanger.ac.uk/Projects/C_elegans/ A:Note: published errata appeared in Science 283, 35, 1999; Science 283, 2103, 1999; and A:Accession: P87937
A:Accession: P87937
A:Residues: 1359 <STOO:
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                                   NiAlternate names: BONT/CI protein
Cispecies: Clostridium botulinum phage IC
Species: Clostridium botulinum phage IC
Aivariev: strain C 468
Cibacession: 846431; 849107
Rithauser, D.; Eklund, M.W.; Boquet, P.; Popoff, M.R.
Rithauser, D.; Eklund, M.W.; Boquet, P.; Popoff, M.R.
Airlie: Organization of the botulinum neurotoxin CI gene and its associated non-toxic A; Reference number: 846426; MuID:94301293; PMID:8028579
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C;Species: Caenorhabditis elegans
C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 09-Jul-2004
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- Clostridium botulinum phage 1C (strain C 468)
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Pred. No. 17;
6; Mismatches 2; Indels
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40.9%; Pred. No. 20;
:ive 7; Mismatches
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Best Local Similarity 42.9
Matches 6; Conservative
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Best Local Similarity 40.95
Matches 9; Conservative
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Gaps
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C,Genetics:
A,Gene: F14B6.6
A;Map position: 1
C,Superfamily: Caenorhabditis elegans hypothetical protein T09F5.1
                                                                                                                        Query Match 42.0%; Score 47; DB 2; Length 359; Best Local Similarity 32.0%; Pred. No. 6.4; Matches 8; Conservative 6; Mismatches 3; Indels
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impatiens

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tomato spot
tomato spot
tospovirus.
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                                       impatiens
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Bacteria: Firmicutes, Clostridia, Clostridiales, Clostridiaceae,
Clostridium.
VCBI_TaxID=1513;
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Bacteria, Firmicutes, Clostridia, Clostridiales, Clostridiaceae,
Clostridium.
NCBI_TaxID=1513,
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                                                                     Q8jxj9
Q8jxk0
P26003
O37367
Q8jvl0
Q8jvk2
Q8jxk2
Q8jxk4
Q88900
P46081
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Shumit Z., Dianliang L.;
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL, AF389424, AAK72964.2;
GO, GO:0008233; F:peptidase activity; IEA.
GO, GO:0009405; P:pathogenesis; IEA.
GO, GO:000508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR011591; Botulinum.
InterPro; IPR008985; Cona_like_lec_g1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=20886;
He H.J., Shi H.J., He Z.Y., Yuan Q.S., Wu X.F.;
He H.J., Shi H.J., He E.Y., Yuan Q.S., Wu X.F.;
Submitred (MAY-1999) to the EMBL/GenBank/DDBJ databases.
EMBL, AFI154828; AAF73267.1;
InterPro; IPR018985; Cona like lec_gl.
InterPro; IPR011065; Kunitz_like.
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SEQUENCE 451 AA; 51823 MW; 69A8C5F030E6CD8E CRC64;
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               BAC99990
VNSS_INSVN
VNSS_TSWV1
QBJXX0
VBJXX0
VNSS_TSWVL
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Q8JVL0
Q8JXK2
Q8JXK4
Q8B900
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Q76D18
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01-DEC-2001 (TrEMBLrel. 19,
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95726 clostridium

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97561 clostridium

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Q45894 clostridium
Q9zaj5 clostridium
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Bab86845 clostridi
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                 GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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Maximum Match 100%
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2: uniprot_trembl:*
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Maximum DB seq length: 2000000000
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13-AUG-1987 (Rel. 05, Last sequence update)
01-0CT-2004 (Rel. 45, Last annotation update)
Tetanus toxin precursor (EC 3.4.24.68) (Tentoxylysin) [Contains:
Tetanus toxin light chain (Tetanus toxin chain L); Tetanus toxin heavy
chain (Tetanus toxin chain H)].
                                                                                                                                                                                                                                                                                                                                                                                              PLASMID=75 Kbp;
MEDLINE=87053814; PubMed=3536478;
Bisel U., Jarausch W., Goretzki K., Henschen A., Engels J., Weller U.,
Hudel M., Habermann E., Niemann H.;
"Tecanus toxin: primary structure, expression in E. coli, and homology with botulinum toxins.";
                                                                                                                                       Gaps
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J. Bacteriol. 165:21-27 (1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of
                                                                                                                                                                                                                                                                                                                                 Plasmid pE88, and Plasmid 75 Kbp.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=Massachusetts / E88; PLASMID=pE88;
MEDLINE=22457253; PubMed=1255129; DOI=10.1073/pnas.0335853100;
Brueggemann H., Baeumer S., Fricke W.F., Wiezer A., Liesegang H.
Decker I., Herzberg C., Martinez-Arias R., Merkl R., Henne A.,
Gottschalk G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "The genome sequence of Clostridium tetani, the causative agent tetanus disease.";
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                                                                                                                Length 1310;
                                                                                            1310 AA; 150316 MW; 9EADDC914418E450 CRC64;
                                                                                                                                     Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proc. Natl. Acad. Sci. U.S.A. 100:1316-1321(2003).
                                                                                                                100.0%; Score 112; DB 2; 100.0%; Pred. No. 2.6e-09;
InterPro; IPR011065; Kunitz_like.
InterPro; IPR000395; Peptidase_M27.
InterPro; IPR006025; Pepti M Zn_BS.
Pfam; PF0175; Peptidase_M27; I.
PROPGM; PR00760; BONTOXILYSIN.
ProDom; PD001963; Botulinum; 1.
PROSITE; PS00142; ZINC_PROTEASE; UNRNOWN_1.
                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PARTIAL SEQUENCE, AND DISULFIDE BONDS. MEDLINE=90201034; PubMed=2108021;
                                                                                                                                                                                                                                                                                                             Name=tetX; OrderedLocusNames=ctp60; Clostridium tetani.
                                                                                                                                                                    948 FNNFTVSFWLRVPKVSASHLE 968
                                                                                                                                                       1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=CN3911; PLASMID=75 Kbp;
MEDLINE=87040747; PubMed=3774547;
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MEDLINE=86085672; PubMed=3510187;
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                                                                                                                                     Conservative
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Best Local Similarity
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SEQUENCE
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TETX_CLOTE
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neurotoxin.";

Nat. Struct. Biol. 4:788-792(1997).

-I. FUNCTION: Tetamus toxin acts by inhibiting neurotransmitter
release. It binds to peripheral neuronal synapses, is internalized
and moves by retrograde transport up the axon into the spinal cord
where it can move between postsynaptic and presynaptic neurons. It
inhibits neurotransmitter release by acting as a zinc
endopeptidase that catalyzes the hydrolysis of the 76-Gln-|-Phe-77
bond of synaptobrevin-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTIFICATION OF SUBSTRATE.
MEDIANE=39063289; PubMed=1331807;
Schiavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P.,
Dasgupta B.R., Montecucco C.,
"Tetanus and botulinum-B neurotoxins block neurotransmitter release by
Krieglstein K., Henschen A., Weller U., Habermann E., "Arrangement of disulfide bridges and positions of sulfhydryl groups
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=97475217; PubMed=9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey W.F., Schmidt J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synaptobrevin 2.
COFACTOR: Binds 1 zinc ion per subunit (By similarity).
COFACTOR: Binds 1 zinc ion per subunit (By similarity).
SUBUNIT: The precursor polypeptide is subsequently cleaved to yield subchains L and These remain linked by a disulfide brand are non-toxic after separation.
MISCELLANEOUS: The C-terminus of the heavy chain binds to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Tetanus toxin is a zinc protein and its inhibition of neurotransmitter release and protease activity depend on zinc."; EMBO J. 11:3577-3583(1992).
                                                                                                                                                                                                                            MEDLINE=92037649; PubMed=1935979;
Krieglatein K.G., Henschen A.H., Weller U., Habermann E.;
"Limited proteolysis of tetanus toxin. Relation to activity and
identification of clasvage sites.";
Eur. J. Biochem. 202:41-51(1991).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=93010948; PubMed=1396558;
Schiavo G., Poulain B., Rossetto O., Benfenati F., Tauc
Montecucco C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF 874-1314.
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SIMILARITY: Belongs to peptidase family M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proteolytic cleavage of synaptobrevin.";
                                                                                                                    Eur. J. Biochem. 188:39-45(1990).
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IDEW; X-ray; A=874-1314.

IDEL; X-ray; A=874-1314.

IFV2; X-ray; A=843-1314.

IFV3; X-ray; A/B=843-1314.
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; 1DOH; X-ray; A=846-1314.
;; 1DFQ; X-ray; A=871-1314.
N: 1DIW; X-ray; A=674-1314.
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EMBL; X06214; CAA29564.1; -.
EMBL; AF528097; AA037454.1; -.
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1AF9; X-ray; @=863-1314.
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                                                                            tetanus toxin."
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Archardwonn F.1.7

Truntlootide sequence of the gene coding for Clostridium barati type F

Theorotoxin: comparison with other clostridial neurotoxins.";

The Fews Microbiol. Lett. 108:175-182(1993).

The Embl. X68262; CAA48329.1;

The Embl. X68262; CAA48329.1;

The Embl. X68262; CAA48329.1;

The FR. S33411.

The FR. S33411.

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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
NCBI_TaxID=1561;
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05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Botulinum neurotoxin type F (Fragment).
Name=BoWT/F;
Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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SEQUENCE FROM N.A.
MEDLINE=93252228; PubMed=8486245;
Thompson D.E., Hutson R.A., East A.K., Allaway D., Collins M.D.
Richardson P.T.;
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Last sequence update)
Last annotation update)
                                                                                                                                       Score 112; DB 1;
Pred. No. 2.6e-09;
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Pred. No. 0.48;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                PRT; 1268 AA
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PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
                                                                                                                                                                                       0; Mismatches
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100.0%;
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Best Local Similarity 64.3%;
Matches 9; Conservative
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922 YQNFSVSFWVRIPK 935
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Q45851;
01-NOV-1996 (TrEMBLrel. 0)
01-NOV-1996 (TrEMBLrel. 0)
01-NAR-2004 (TrEMBLrel. 20
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Best Local Similarity
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DR InterPro; IPR000985; ConA like lec_gl.

InterPro; IPR000985; Kunitz_like.

BR InterPro; IPR000595; Runitz_like.

BR InterPro; IPR006025; Pept_M Zn_BS.

BR InterPro; IPR006025; Pept_M Zn_BS.

BR PRINTS; PR00760; Bontoxilysin; 1.

BROSITE; PS00142; ZINC_PROTEASE; 1.

BROSITE; PS00142; ZINC_PROTEASE; 1.

BROSITE; PS00142; ZINC_PROTEASE; 1.

BROSITE; PS00142; ZINC_PROTEASE; 1.

TOTALIOPFOCEASE; Neurotoxin; Plasmid; Transmembrane; Zinc.

TOTALINT_MET 1 456

TOTALINT_NET 1 456
                                                                                                                                                                                                                                                                                                                                 Tetanus toxin light chain.
Tetanus toxin heavy chain.
Zinc (catalytic) (By similarity)
By similarity.
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Potential.
Potential.
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ID 05
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                                                              Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 634-1002 FROM N.A.
MEDLINE=94013372; PubMed=8408542;
Campbell K., East A.K., Collins M.D.;
Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=TYPE F / ATCC 23387;
MEDLINE=93012902; PubMed=1398040;
East A.K., Richardson P.T., Allaway D., Collins M.D., Roberts T.A.,
Thompson D.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                East A.K., Collins W.D.; "Conserved Structure of genes encoding components of botulinum neurotoxin complex M and the sequence of the gene coding for the nontexic component in nonproteolytic Clostridium botulinum type F.Curr. Microbiol. 29:69-77(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Sequence of the gene encoding type F neurotoxin of Clostridium botulinum.";
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                                                                                                                                                                                                                                                                                                                                                                                   01-JUL-1993 (Rel. 26, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type F precursor (EC 3.4.24.69) (BONT/F)
                                                                                                                                                                                                                                         54.5%; Score 61; DB 2; Length 366; 57.1%; Pred. No. 0.19; 1tive 5; Mismatches 1; Indels
                                                                                                                        STRAINetype F;
Campboll K.D.;
Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; X70821; CAA50152.1;
                                                                                                                                                                                                         366 AA; 43136 MW; 45A132B235D7E640 CRC64;
                                                                                                                                                                                                                                                                                                                                                          PRT; 1274 AA.
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                                                                                                                                                                  30; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR008985; ConA_like_lec_gl
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STRAIN=TYPE F / Hobbs FT10;
MEDLINE=94297488; PubMed=7764998;
                                         STRAIN=type F;
MEDLINE=94013372; PubMed=8408542;
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297 YQNFSISFWVRIPK 310
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tes 8; Conserv
                               FROM N.A.
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        NCBI_TaxID=1491;
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RA Yamasaki S., Baumeister A., Binz T., Blasi J., Link E., Cornille F., Roques B., Fykse E.M., Suedhof T.C., Jahn R., Niemann H.;

Roques B., Fykse E.M., Suedhof T.C., Jahn R., Niemann H.;

"Cleavage of members of the synaptobrevin/VAMP family by types D and F T. Cleavage of members and tetanus toxin.";

J. Biol. Chem. 269:12764-12772(1994).

"C. -!-FUNCTION: Botulinum toxin acts by inhibiting neurotransmitter release. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It inhibits neurotransmitter release by acting as a zinc endopeptidase that catalyzes the hydrolysis of the 58-Gln-|-Lys-59 cordopeptidase that catalyzes the hydrolysis of the Sa-Gln-|-Lys-59 cordopeptidase that catalyzes the hydrolysis of the Sa-Gln-|-Lys-59 cordopeptidase that catalyzes the hydrolysis of the Sa-Gln-|-Lys-59 cordopeptidase that catalyzes the hydrolysis of the Sa-Gln-|-Lys-59 cordopeptidase action on small molecule substrates.

"C. -CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

"C. -COPACTOR: Binds 1 zinc ion per subunit (By similarity).

"C. -COPACTOR: Binds 1 zinc ion per subunit (By similarity).

"C. -COPACTOR: Binds 1 zinc ion per subunit (By similarity).

"C. -COPACTOR: Binds 1 zinc ion per subunit (By similarity).

"C. -COPACTOR: Binds 1 zinc ion per subunit (By similarity).

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EMBL; S73676; AAC60455.1; --
EMBL; X70820; CAA50151.1; --
EMBL; X70816; CAA50147.1; --
PIR; 140813; 140813
PIR; S48109; 548109.
HSSP; Q45894; IBIH.
MEROPS; M27.002; --
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1274 AA;
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MEDLINE-94092745; PubMed=8268233;

MEDLINE-94092745; PubMed=8268233;

MEDLINE-94092745; PubMed=8268233;

MEDLINE-94092745; PubMed=8268233;

MUCLeocide sequence of the gene coding for Clostridium botulinum

(Clostridium argentinense) type G neurotoxin: genealogical comparison

(Clostridium argentinense) type G neurotoxin: genealogical comparison

with other clostridial neurocoxine.";

1- FUNCTION: Botulinum toxin acts by inhibiting neurotransmitter

release. It binds to peripheral neuronal synapses, is internalized

and moves by retrograde transport up the axon into the spinal cord

where it can move between postsynaptic and presynaptic neurons. It
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Clostridium botulinum.
Clostridia, Firmicutes, Clostridia, Clostridiales, Clostridiaceae,
Clostridium.
VCBI_TaxID=1491;
                                                                                                       Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type G precursor (EC 3.4.24.69) (BONT/G)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1278;
                                                                                                                                                                                                                                                                                                                Elmore M.J., Bodsworth N.J., Whelan S.M., Minton N.P.;
Submitted (AUG-1994) to the EMBL/GenBank/DDBJ databages.
EMBL; X81714; CAA57358.1; -.
EMBL; L35496; AAA23210.1; -.
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                                                                                                                                                                                                                STRAIN=NCTC 10281;
Hutson R.A., Collins M.D.;
Submitted (SEP-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0009405; P:pathogenesis; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 05-JUL-2004 (TrEMBLrel. 27, Last annotation update) BONT/F (Neurotoxin type F)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54.5%; Score 61; DB 2;
57.1%; Pred. No. 0.7;
iive 5; Mismatches 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR011591, Boulinum.
InterPro; IPR008885; ConA like lec_gl.
InterPro; IPR001065; Kunitz like.
InterPro; IPR0010395; Peptidase_M27.
InterPro; IPR006035; Pept M Zn Bs.
Pfam; PF01742; Peptidase_M27; I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1997 (Rel. 35, Created)
                                                              Name=bont/f; Synonyms=bonT/F; Clostridium botulinum.
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HSSP; Q45894; 1E1H.
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GO; GO:0008233; F
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch)
                                                                                    CATALTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

COFACTOR: Binds I zinc ion per subunit (By similarity).

SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, while the N- and C-terminal of the heavy chain mediate channel
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MEDLINE=90235864; PubMed=2185020;
Thompson D.E., Brehm J.K., Oultram J.D., Swinfield T.-J., Shone C.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RESORS; M27.002; | 12.1. |
| RESORS; M27.002; | 12.1. |
| R. HUERPEO; IPR000895; CONA_like_lec_gl. |
| R. HUERPEO; IPR001035; Pept_M Zn_Bs. |
| R. HUERPEO; IPR001035; Pept_M Zn_Bs. |
| R. HUERPEO; IPR001035; Pept_M Zn_Bs. |
| R. FFGN, PR0076; BONTOXILYSIN. |
| R. PRONTS; PR0076; BONTOXILYSIN. |
| R. PRONTS; PR0076; BONTOXILYSIN. |
| R. PROSTE; PS00142; ZINC_ROTEABs, 1. |
| R. PROSTE; PS00142; ZINC_ROTEABs, 1. |
| R. PROSTE; PS00142; ZINC_ROTEABs, 1. |
| R. PROSTE; PS00142; ZINC_ROTEABs, 1. |
| Hydrolase; Metalloprotease; Neuroroxin, Zinc. |
| Hydrolase; Metalloprotease; Neuroroxin, Zinc. |
| Hydrolase; Metalloprotease; Neuroroxin G light-chain. |
| Hydrolase; Metalloprotease; Neuroroxin, Zinc. |
| Hydrolase; Metalloprotease; Neuroroxin, Zinc. |
| R. HATAL | 229 | Zinc | (catalytic) |
| RETAL | 230 | Zinc | (catalytic) |
| RETAL | 231 | Zinc | (catalytic) |
| RETAL | 233 | Zinc | (catalytic) |
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                             formation and toxin binding, respectively.
SUBCELLULAR LOCATION: Secreted (By similarity).
MISCELLANBOUS: There are seven antigenically distinct forms botulinum neurofoxin: Types A, B, Cl, D, E, F, and G.
SIMILARITY: Belongs to peptidase family M27.
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neurotransmitter release by acting as a zinc
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Dasgupta B.R., Foley J., Niece R.; "Partial sequence of the light chain of botulinum neurotoxin type A."; Biochemistry 26:4162-4162(1987).
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MEDLINE=85285016; PubMed=3896784;
Shone C.C., Hambleton P., Melling J.;
Shone C.C., Hambleton P., Melling J.;
Inactivation of Clostridium botulinum type A neurotoxin by trypsin and purification of two tryptic fragments. Proteolytic action near the COOH-terminus of the heavy subunit destroys toxin-binding activity.";
Eur. J. Biochem. 151:75-82(1985).
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MEDLINE-96096783; PubMed-8521962;
Pujita R., Fujinaga Y., Inoue K., Nakajima H., Kumon H., Oguma K.;
"Molecular characterization of two forms of nontoxic-nonhemagglutinin components of Clostridium botulinum type A progenitor toxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=97016817; PubMed=8863443;

MEDLINE=97016817; PubMed=8863443;

East A.K., Bhandari M., Stacey J.M., Campbell K.D., Collins M.D.;

"Organization and phylogenetic interrelationships of genes encoding components of the botulinum toxin complex in proteclytic Clostridium botulinum types A, B, and F: evidence of chimeric sequences in the gene encoding the nontoxic nonhemagglutinin component.";

Int. J. Syst. Bacteriol, 46:1105-1112(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Betley M.J., Somers E., Dasgupta B.R.; "Characterization of botulinum type A neurotoxin gene: delineation of the N-terminal encoding region.";
                                                                                                                                                                                                                            STRAIN=Type A / 62A;
MEDILINE=90264400; PubMed=2160960;
MEDILINE=90264400; PubMed=2160960;
Blinz B., Kuarzono H., Wille M., Frevent J., Wernars K., Niemann H.;
"The complete sequence of botulinum neurotoxin type A and comparison with other clostridial neurotoxins.";
Atkinson T., Melling J., Minton N.P.; "The complete amino acid sequence of the Clostridium botulinum type neurotoxin, deduced by nucleotide sequence analysis of the encoding
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the heavy chain into two
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"Partial amino acid sequence of the heavy and light chains of botulinum neurotcoxin type A.";
Biochem. Biophys. Res. Commun. 119:900-904(1984).
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SEQUENCE OF 1-5 AND 444-456.
MEDLINE=91120847; PubMed=2126206;
Dasgupta B.R., Dekleva M.L.;
"Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neurotoxin type A: sequence of "Botulinum neuroto
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Sathymoorthy V., Dasgupta B.R., Foley J., I
"Botulinum neurotoxin type A: cleavage of thalves and their partial sequences.";
Arch. Biochem. Biophys. 266:142-151(1988).
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MEDLINE=89350959; PubMed=2669749;
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                                                                                                                                      Eur. J. Biochem. 189:73-81(1990)
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SEQUENCE OF 1-65 FROM N.A.
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heavy chain (H).

-- SUBCELLULAR LOCATION: Secreted.
-- PHARMASCEDITICAL: Available under the name BOTOX (Allergan) for the treatment of strabismus and blepharospasm associated with dystonia and cervical dystonia. Also used for the treatment of hemifacial spasm and a number of other neurological disorders characterized by abnormal muscle contraction.
-- MISCELLANBOUS: There are seven antigenically distinct forms of botulinum neurotoxin: Types A, B, Cl, D, E, F, and G.
-- SIMILARITY: Belongs to peptidase family M27.
-- SIMILARITY: Belongs to peptidase family M27.
-- DATABASE: NAME-BOTOX product information Web site;
WWW="http://www.botox.com/site/".
-- DATABASE: NAME-Protein Spotlight; NOTE=Issue 19 of February 2002;
WWW="http://www.expasy.org/spotlight/articles/sptlt019.html".
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-!- FUNCTION: Inhibits acetylcholine release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic membrane, is then internalized by receptor-mediated endocytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus mediates transport of the light chain from the endocytic vesicle to the cytosol. After translocation, the light chain (L) hydrolyzes the 197-Gln-|-Arg-198 bond in SNAP-25, thereby blocking neurotransmitter release. Inhibition of acetylcholine release results in flaccid paralysis, with frequent heart or respiratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=98455071; PubMed=9783750;
Lacy D.B., Tepp W., Cohen A.C., Dasgupta B.R., Stevens R.C.;
"Crystal structure of botulinum neurotoxin type A and implications for
                                                                                                                                                                                                                                                                                                                                                                                                                           Binz T., Blasi J., Yamasaki S., Baumeister A., Link E., Suedhof T.C., Jahn R., Niemann H.; Remann H.; Remann H.; Remann H.; Remann H.; Remann H.; Proteolysis of SNAP-25 by types E and A botulinal neurotoxins."; J. Biol. Chem. 269:1617-1620(1994).
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MEDILINE-94663191, PubMed=8243676,
Schiavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J.,
Benfenati F., Wilson M.C., Montecucco C.,
"Botulinum neurotoxins serotypes A and E cleave SNAP-25 at distinct
CCOH-terminal peptide bonds";
FEBS Lett. 335:99-103(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. detected action on small molecule substrates. COFACTOR: Binds 1 zinc ion per subunit. SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and
                                                                Gimenez J.A., DasGupta B.R.; "Botulinum type A neurotoxin digested with pepsin yields 132, 97, 45, 42, and 18 MD fragments."; J. Protein Chem. 12:351-363(1993).
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MEDLINE=21556941; PubMed=11700044; DOI=10.1006/bbrc.2001.5911;
Rigoni M., Caccin P., Johnson B.A., Montecucco C., Rossetto O.;
"Site-directed mutagenesis identifies active-site residues of the light chain of botulinum neurotoxin type a.";
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                      OF 866-879 AND 1147-1218
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                   SEQUENCE OF 866
PubMed=8397793;
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01-NOV-1996 (TrEMBLrel. 01,
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Campbell K.D.;
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InterPro; IPR000025; Peptidase M37, I.
PRINTS; PR00760; BontoXiLYSIN.
PROSITE; PS00142; ZINC PROTEASE; I.
PROSITE; PS00142; ZINC PROTEASE; I.
SU-structure; Direct protein sequencing; Hydrolase; Metalloprotease; NeurotoXin; Pharmaceutical; Transmembrane; Zinc.
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CHAIN 1 1947 Botulinum neurotoXin A light-chain.
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MEDLINE-22617869; PubMed=12732962;
Dinean S.S., Bradshaw M., Johnson E.A.;
Dinean S.S., Bradshaw M., Johnson E.A.;
"Neuroctoxin Gene Clueters in Clostridium botulinum Type A Strains:
Sequence Comparison and Evolutionary Implications.";
Curr. Microbiol. 46:345-352(2003).
EMBL; AF461540; AAM75961.1;
SEQUENCE 1296 AA; 149425 MW; DEABC27554AE43E6 CRC64;
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Botulinum neurotoxin A heavy-chain.
Zinc (catalytic).
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02-WAR-2004 (TrEMBLrel. 27, Last sequence update)
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Zinc (catalytic).
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EMBL; M30196; AAA23362.1; -.
EMBL; X92973; CAA63551.1; -.
EMBL; D67030; BAA11051.1; -.
EMBL; M27892; AAA23269.1; -.
PIR; A35294; BTCLAB.
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MEDLINE=9401332; PubMed=8408542;
Campbell K., East A.K., Collins M.D.;
Campbell K., Edentification of the botulinal neurotoxin gene and specific identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                              Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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STRAIN=Allergan-Hall A;
MEDLINE=2291944, PubMed=14557061;
MEDLINE=2291944, PubMed=14557061;
Zhang L., Lis., Aoki K.R.;
"Complete DNA sequences of the botulinum neurotoxin complex of clostratidum botulinum type A-Hall (Allergan) strain.";
Gene 315:21-32(2003)
EMBL; AF488749; AAQ06331.1; -.
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EMBL; X70814; CAR50145.1; -.
GO; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR008985; ConA_like_lec_gl.
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PRT; 1296 AA.
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EMBL; AJ242628; CAB43706.1;
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Name=botB;
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BXB_CLOBO
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"Gene probes for identification of the botulinal neurotoxin gene and
specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
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MEDLINE=99343691; PubMed=10413679;
Liali G., Herreros J., Osborne S.L., Montecucco C., Rossetto O., Schlavo G.,
Schlavo G., interestation of tetanus and botulinum neurotoxins binding domains.";
J. Cell Sci. 112:2715-2724(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Name=BoNT/B;
Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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Bacteria, Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
Clostridium.
WCBI_TaxID=1491;
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        Length 361;
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                                                             1; Indels
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Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
EMBL, X70019; CAA50150.1; -..
GO; GO:00009405; P:pathogenesis; IEA.
InterPro; IPR008985; ConA_like_lec_g1.
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361 AA; 42131 MW; A2E0FFFC81F9533D CRC64;
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Pred. No. 0.58;
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01-NOV-1999 (TrEMBLrel. 12, Last sequenc
01-OCT-2003 (TrEMBLrel. 25, Last annotat
Botulinum neurotoxin type B (Fragment).
Name-boNT/B;
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MEDLINE=94013372; PubMed=8408542;
  51.8%;
64.3%;
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290 FLDFSVSFWIRIPK 303
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290 FLDFSVSFWIRIPK 303
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Query Match
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Matches 9; Conservative
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NCBI_TaxID=1491;
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STRAIN=Type B / Okra;
MEDLINE-85197963; PubMed=3888113;
Schmidt J.J., Sathyamoorthy V., Dasgupta B.R.;
"Partial amino acid sequences of botulinum neurotoxins types B and
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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P10844; P10843;
01-JUL-1999 (Rel. 1, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
01-OCT-2004 (Rel. 45, Last annotation update)
Botulinum neurotoxin type B precursor (EC 3.4.24.69) (BONT/B)
                                                                                                                                                                                                                                     Score 58; DB 2; Length 441;
Pred. No. 0.72;
4; Mismatches 1; Indels
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Szabo E.A., Pemberton J.M., Desmarchelier P.M.;
Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                              721D0B468E8C95A4 CRC64;
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[2]
SEQUENCE OF 35-245 FROM N.A.
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GO, GO:0009405; P:pathogenesis; IEA.
InterPro; IPR008985; ConA like lec_gl.
InterPro; IPR011065; Kunitz_like.
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MEDLINE=92384550; PubMed=1514783;
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STRAIN-TYPE B / B-657;
MEDLINE-89000987; PubMed=3139097;
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IDENTIFICATION AS ZINC-PROTEASE.
MEDLINE=93054694; PubMed=1429690;
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441 AA; 52772 MW;
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Local Similarity 64.3%;
Hes 9; Conservative '
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WEDLITERS 93063293; PubMed=1131807;
Schlavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P.,
Dasgupta B.R., Montecucco C.;
Tetanus and botulinum-B neurotoxins block neurotransmitter release by
Troteolytic cleavage of synaptobrevin.";

Nature 359:832-835(1922).

L. Faranus Botulinum toxin acts by inhibiting neurotransmitter
release. It binds to peripheral neuronal synapses, is internalized
and moves by retrograde transport up the axon into the spinal cord
where it can move between postsynaptic and presynaptic neurons. It
inhibits neurotransmitter release by acting as a zinc
endopepptidase that cleaves the 76-Gln-|-Phe-77 bond of
synaptobrevin-2.

-I- CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the
neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No
detected action on small molecule substrates.

-I- CORACTOR: Binds 1 zinc ion per subunit (By similarity).

-I- SUBGNIT: Disulfide-linked heterodimer of a light chain (L) and a
heavy chain (H). The light chain has the pharmacological activity,
while the N- and C-terminal of the heavy chain mediate channel

-I- SUBGELLANBOUS: There are seven antigenically distinct forms of
botulinum neurotoxin: Types A, B, Cl, D, E, F, and G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its moch non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Botulinum neurotoxin B heavy-chain.
Zinc (catalytic) (By similarity).
By similarity.
Zinc (catalytic) (By similarity).
Interchain (Probable).
T -> M (in Ref. 4).
R -> G (in Ref. 2).
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                                                                                                           IDENTIFICATION OF SUBSTRATE.
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Best Loc Matches

20807; 008077

RESULT 16 Q08077

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MEDLINE=98440323; PubMed=9767710; Santos-Buelga J., Collins M.D., East A.K.; Characterization of the genes encoding the Botulinum neurotoxin complex in a strain of clostridium botulinum producing type B & F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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      A Santos-Balga J.A.;
Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; Y13630; CAA73968.1; -
EMBL; Y13630; CAA73968.1; -
EMBL; Y13630; CAA73968.1; -
EMBL; Y13630; CAAA13068.1; -
GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0006508; P:pethogenesis; IEA.
EMBLETPO; IPR001591; Botulinum.
EMBLETPO; IPR001995; COAA_IIKe_lec_gl.
EMBLETPO; IPR001055; Wunitz like.
EMBLETPO; IPR001055; Peptidase_M27.
INTERPO; IPR001055; Peptidase_M27.
EMBLETPO; IPR001055; Peptidase_M27.
EMBLETPO; IPR001055; Peptidase_M27.
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                                                                                                                                                                                                                     GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0008405; P:pathogenesis; IEA.
GO; GO:000508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR011591; Botulinum.
InterPro; IPR011951; Botulinum.
InterPro; IPR011065; Kunitz like.
InterPro; IPR011065; Kunitz like.
InterPro; IPR00035; Peptidase_M27.
InterPro; IPR00035; Peptidase_M27.
Pfam; PF01742; Peptidase_M27; I.
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64.3%; Pred. No. 2.2;
tive 4; Mismatches
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PRODOM; PD001963; BOTULINUM; 1.
PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
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923 FLDFSVSFWIRIPK 936
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les 9; Conservative
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SEQUENCE FROM N.A.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Clostridium botulinum.
Bacteriais Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
NCBI_TaxID=1491;
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STRAIN=SKlund 17B ATCC25765;
MEDLINE=94122659; PubMed=7764370;
Hutson R.A., Collins M.D., East A.K., Thompson D.E.;
"Nuclectide sequence of the gene coding for non-proteolytic
Clostridium botulinum type B neurotoxin: comparison with other
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                                                              Length 1290;
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64.3%; Pred. No. 2.2;
ive 4; Mismatches 1; Indels
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71BCAFEZ3D69FAAA CRC64;
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GO; GO:0009405; P:pathogenesis; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
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Last annotation update)
                                                           DB 1;
2.2;
                                                       Score 58; DB ]
Pred. No. 2.2;
4; Mismatches
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InterPro; IPR011591, Botulinum.
InterPro; IPR011065, Kunitz like.
InterPro; IPR001065, Kunitz like.
InterPro; IPR0006025, Peptidase_M27.
InterPro; IPR006025, Peptidase_M27.
InterPro; IPR006025, Peptidase_M27.
PR1NTS, PR00766, BONTOXILYSIN.
ProDom; P0001963, Botulinum; 1.
PROSITE; PS00142; ZINC_PROTEASE; UNKNOWN SEQUENCE 1291 AA; 150513 MW; 71BCAFF
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Curr. Microbiol. 28:101-110(1994).
BEL; X71343; CAA50482.1; -.
PIR; 140631; 140631.
HSSP; P10844; 1F31.
                                                       51.8%;
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01-NOV-1996 (TrEMBLrel. 01,
01-MAR-2004 (TrEMBLrel. 26,
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FLDFSVSFWIRIPK 935
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FLDFSVSFWIRIPK 936
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Best Local Similarity
9; Conserve
                                                                                        Local Similarity
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RESULT 17 QBGR96

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Gaps

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proteolysis and peptidolysis; IEA.
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Clostridium botulinum.
Bacteria, Firmicutes, Clostridia, Clostridiales, Clostridiaceae,
Clostridium.
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                                                                                                                                                                                                                                   Kirma N., Ferreira J.L., Baumstark B.R.;

Kirma N., Ferreira J.L., Baumstark B.R.;

Submitted (AuG-2000) to the EMBL/GenBank/DDBJ databases.

EMBL; AF300466; AAL11499.1; -.

REMBL; AF300466; AAL11498.1; -.

R GO; GO:0008233; F:peptidase activity; IEA.

GO; GO:0008233; F:peptidase activity; IEA.

GO; GO:0009405; P:pathogenesis; IEA.

R GO; GO:0009405; P:pathogenesis; IEA.

R InterPro; IPR011591; Botulhuum.

R InterPro; IPR011065; Kunitz like.

R InterPro; IPR000395; Peptidase M2.

R InterPro; IPR000525; Pept M Zn.

R PRINTS; RR00760; BOUNCXILYSIN.
           DB 2; Length 1291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        1291 AA; 150842 MW; 7AC1737B0FA5A151 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kirma N., Ferreira J.L., Baumstark B.R.;
Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF295926; AAK97132.1; -.
HSSP; P10844; 1F31.
                                                                                                                                          01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
05-UUL-2004 (TrEMBLrel. 27, Last annotation update)
Type B cryptic neurotoxin.
Clostridium botulinum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                            51.8%; Score 58; DB 2; 64.3%; Pred. No. 2.2;
          Score 58; DB 2
Pred. No. 2.2;
4; Mismatches
                                                                                                                         PRT; 1291 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT; 1291 AA.
                                                                                                                                                                                                                                                                                                                                                                                                        robom; PD001963; Botulinum; 1.
ROSITE; PS00142; ZINC_PROTEASE; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO:0008233; F:peptidase activity; IEA GO:0009405; P:pathogenesis; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
         51.8%;
llarity 64.3%;
Conservative
                                                             | :||||:|||
923 FLDFSVSFWIRIPK 936
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923 FLDFSVSFWIRIPK 936
                                                  1 FNNFTVSFWLRVPK 14
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Best Local Similarity 64.5.
9; Conservative
                                                                                                                         PRELIMINARY;
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Query Match
Best Local Similarity
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                                                                                                                                                                                                                  NCBI_TaxID=1491;
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                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licensee&isb-sib.ch).
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MEDILINE-98278311; FubMed-9617769;
Williams C.F., Inoue T., Lucus A.-M., Zanotto P., Roy P.;
Williams C.F., Inoue T., Lucus A.-M., Zanotto P., Roy P.;
"The complete sequence of four major structural proteins of African horse sickness virus serotype 6: evolutionary relationships within and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              between the orbiviruses."; Virus Res. 53:53-73(1998).
-!- FUNCTION: The VP2 protein is one of the two proteins (with VP5) which constitute the virus particle outer capsid. It is the major target of the host immunogenic response.
-!- SIMILARITY: Belongs to the recoviruses VP2 protein family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Name=S2; Synonyms=L2;
African horse sickness virus 6 (AHSV-6) (African horse sickness virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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Pred. No. 2.6;
4; Mismatches 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                    Score 58; DB 2; Length 1291;
Pred. No. 2.2;
4; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                            1291 AA; 150824 MW; D7CA07BAE2EB8CD2 CRC64;
InterPro; IPR011591; Bottlinum.
InterPro; IPR010591; Bottlinum.
InterPro; IPR010595; ConA like lec_gl.
InterPro; IPR010595; ConA like.
InterPro; IPR010595; Pept M Zn BS.
InterPro; IPR006025; Pept M Zn BS.
InterPro; IPR006025; Pept M Zn BS.
InterPro; IPR00760; Pept M Zn BS.
InterPro; IPR00760; BONTOXILYSIN; IPR07609; Pept M Zn BS.
IPR051TB; PS00142; ZlNC_PR0TEASE; UNKNOWN_I.
INTERPROFERED SEQUENCE 1291 AA; 150824 WW; D7CA07BAEZEBB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (serotype 6)).
Viruses; dsRNA viruses; Reoviridae; Orbivirus.
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15-DEC-1998 (Rel. 37, Last sequence update)
05-UUL-2004 (Rel. 44, Last annotation update)
Outer capsid protein VP2.
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636 FSKRFVSYWYRVEKITTKHLE 656
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InterPro; IPR001742; Orbi_VP2.
Pfam; PP00898; Orbi_VP2; Ī.
Coat protein.
SEQUENCE 1051 AA; 122326 MW
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Best Local Similarity 47.6%;
Matches 10; Conservative
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923 FLDFSVSFWIRIPK 936
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Best Local Similarity 64...
Best Local 9; Conservative
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Gaps

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Indels

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SECUENCE OF 419-426.
MEDLINE=9034918; PubMed=2116911;
Gimenca J.A., Dasgupta B.R.;
"Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the site trypsin nicks and homology with tetanus neurotoxin.";
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SEQUENCE FROM N.A.
MEDLINE-92174922; PubMed=1541280;
Whelan S.M., Elmore M.J., Bodsworth N.J., Atkinson T., Minton N.P.;
Whelan S.M., Elmore M.J. sequence of the Clostridium botulinum type-E
"The complete amino acid sequence of the Clostridium botulinum type-E
neurotoxin, derived by nucleotide-sequence analysis of the encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    [1] —
SEQUENCE FROM N.A.
SERAIN=Type E / Beluga;
STRAIN=Type E / Beluga;
STRAIN=Type E / Beluga;
STRAININE=92181428; PubMed=1543481;
Poulet S., Hauser D., Quanz M., Niemann H., Popoff M.R.;
Sequences of the botulinal neurotoxin E derived from Clostridium botulinum type E (strain Beluga) and Clostridium butyricum (strains ATCC 43181 and ATCC 4375).";
Biochem. Biophys. Res. Commun. 183:107-113(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Binz T., Kurazono H., Wille M., Frevert J., Wernars K., Niemann H.; "The complete sequence of botulinum neurotoxin type A and comparison with other clostridial neurotoxins."; "J. Biol. Chem. 265:9153-9158 (1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=94063091; PubMed=8243676; Schlavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J., Schlavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J., Moltanti F., Wilson M.C., Montecucco C.; Coriavo SNAP-25 at distinct COOH-terminal peptide bonds."; FEBS Lett. 335:99-103(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-85197963; PubMed-3888113; Schmidt J.J., Sathyamoorthy V., Dasgupta B.R.; Bartyamoorthy V., Basgupta B.R.; Partial amino acid sequences of botulinum neurotoxins types B and
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                                                                                                                                                                                                                                                                                                               01-JUL-1993 (Rel. 26, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type E precursor (EC 3.4.24.69) (BONT/E)
                                                                                    Length 367,
      1
367 AA; 42854 MW; 0810595B3A865570 CRC64;
                                                                                  Score 56; DB 2;
Pred. No. 1.3;
                                                                                                                                                                                                                                                                                                       PRT; 1250 AA
                                                                                                                           5; Mismatches
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                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                    50.0%;
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                                                                                                                                                                                        : ||::|||:|
297 YKNFSISFWVRIP 309
                                                                                                                                                                1 FNNFTVSFWLRVP 13
                                                                                                    Local Similarity 53.8
les 7; Conservative
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Q00496;
                      NON_TER
SEQUENCE
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Matches
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BXE CLOBO
        S 7.7
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MEDLINE=9401372; PubMed=8408542;
Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
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MEDLINE=94013372; PubMed=8408542;
Campbell K. Collins M.D.;
Campbell K. A.K., Collins M.D.;
Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                     Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-type B;
Campbell K.D.;
Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
EMBL; X70818; CAA50149.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42902 MW; 346A610C2FF70262 CRC64;
                                                           01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-OCT-2003 (TrEMBLrel. 25, Last annotation update) Botulinum neurotoxin type B (Fragment).
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Last annotation update)
    367 AA
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01-NOV-1996 (TrEMBLrel. 01, Last seque
01-OCT-2003 (TrEMBLrel. 25, Last annot.
Botulinum neurotoxin type E (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO; GO:0009405; P:pathogenesis; IEA.
InterPro; IPR008985; Cona_like_lec_gl.
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InterPro; IPR008985; ConA_like_lec_gl
Neurotoxin,
                                  01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last seq
01-OCT-2003 (TrEMBLrel. 25, Last ann
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Best Local Similarity 53.8%
Matches 7; Conservative.
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297 YKNFSISFWVRIP 309
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PIR; S21178; S21178.
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PRELIMINARY;
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367
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Campbell K.D.;
                                                                                                                     Name=BoNT/E;
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SEQUENCE
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RESULT 23 045862

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ò g 1250 AA.

PRT;

STANDARD;

Created)

and ATCC 43755;

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MEDLINE=91237316; PubMed=2033376; Fujii N., Kimura K., Murakami T., Indoh T., Tsuzuki K., Yokosawa N., Yashiki T., Oguma K.; Yashiki T., Oguma K.; Cloning of a DNA fragment encoding the 5'-terminus of the botulinum type E toxin gene from Clostridium butyricum strain BL6340."; J. Gen. Microbiol. 137:519-525(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Poulet S., Hauser D., Quanz M., Niemann H., Popoff M.R.; "Sequences of the botulinal neurotoxin B derived from Clostridium botulinum type B (strain Beluga) and Clostridium butyricum (strains ATCC 43181 and ATCC 43755).";
                                                                                                                                                                                                                                                              Clostridium butyricum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                             01-JUL-1993 (Rel. 26, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Botulinum neurotoxin type E precursor (EC 3.4.24.69) (BONT/E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biochem. Biophys. Res. Commun. 183:107-113(1992).
                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=ATCC 43181, and ATCC 43755
MEDLINE=92181428; PubMed=1543481;
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                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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STRAIN=5262;
                                                                                                                                                                                                                                                                                                          Clostridium.
NCBI_TaxID=1492;
                                                                                                                                                                                                                                          (Bontoxilysin E)
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                                                                                                                                            01-JUL-1993
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                                                                                                                      Transference of SNAP-25 by types E and A botulinal neurotoxins.";

J. Biol. Chem. 269:1617-1620(1994).

L. PUNCTION: Botulinum toxin acts by inhibiting neurotransmitter release. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It inhibits neurotransmitter release by acting as a zinc endopeptidase that catalyzes the hydrolysis of the 180-Arg-|-11e-chaptidase that catalyzes the hydrolysis of the 180-Arg-|-11e-chaptidase that catalyzes the hydrolysis of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

C. I-COPACYOR: Binds 1 zinc ion per subunit (By similarity).

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                      MEDLINE=94124495; PubMed=8294407;
Binz T., Blasi J., Yamasaki S., Baumeister A., Link E., Suedhof T.C.,
Jahn R., Niemann H.;
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Botulinum neurotoxin E heavy-chain.
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By similarity.
Zinc (catalytic) (By similarity).
Interchain (Probable).
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ROSSITE; PS00143; ZINC PROTEASE; 1.
Direct protein sequencing; Hydrolase; Metalloprotease; Neurotoxin;
Transmembrane; Zinc.
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InterPro; IPR006025; Pept M Zn BS.
Pfam; PF01742; Peptidase_M27; I
PRINTS; PR00760; BONTOXILYSIN.
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InterPro; IPR011065; Kunitz like.
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MEROPS; M27.002; -.
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                                                                Jahn R.,
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                                                                                          partial sequence and comparison.";

FASEB J. 2:A1750-A1750(1988).

-!- FUNCTION: Botulinum toxin acts by inhibiting neurotransmitter release. It binds to peripheral neuronal synapses, is internalized and moves by retrograde transport up the axon into the spinal cord where it can move between postsynaptic and presynaptic neurons. It inhibits neurotransmitter release by acting as a zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

GOPACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, while the N- and C-terminal of the heavy chain mediate channel formation and toxin binding, respectively.

SUBCELLUAR LOCATION: Secreted.

MISCELLUAR LOCATION: Secreted.

MISCELLUAR LOCATION Secreted.

SUBCELLUAR LOCATION Secreted.

SIMILARITY: Belongs to peptidase family M27.
Gimenez J., Foley J., Dasgupta B.R.; "Neurotoxin type E from Clostridium botulinum and C. butyricum;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP, Q45894; 1E1H.
MEROPS; M27.002; -.
InterPro; IPR008985; ConA_like_lec_gl.
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HSSP, Q45894; 1E1H.
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                                                                                                                              This peptide corresps. to residues 947-967 of Tetanus toxin. It can be used as a universal carrier for the prepn. of an immunogenic conjugate. It is covalently bound to a peptide or polysaccharide hapten derived from a pathogen. This conjugate can be used as a vaccine for malaria. This peptide is recognised by different T- helper cell clones in association with alleles of the human MHC. It contains 2 epitopes: (a) 953-967, recognised by DR-restricted clones; and (b) 947-960, recognised by all other DR and DP- restricted clones. (Updated on 25-MAR-2003 to correct PI field.) (Updated on 27-MUG-2003 to correct PI field.) (Updated on 24-0CT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A helper T-cell epitope (AAW06130) comprises amino acids 947-967 of tetanus toxoid protein. It can be utilised in novel peptide vaccines (sealso AAW06129, AAW06132) also including B-cell epitope(8) from human or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cholesteryl ester transfer protein; CETP; antigen; vaccine;
cardiovascular disease; atherosclerosis; tetanus toxoid; T-cell epitope.
                                                                          Synthetic peptide(s) used as universal carriers - for preparing immunogenic conjugates used as vaccines against plasmodium falciparum.
                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cholesteryl ester transfer protein B cell epitope linked to T cel epitope - used to generate vaccine to regulate CETP activity for decreasing the risk of developing a cardiovascular disease e.g.
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                                                                                                                                                                                                                                                                             Length 21;
                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 2; 100.0%; Pred. No. 7.8e-12;
                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tetanus toxoid protein T-cell epitope.
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                                                                                                                                                                                                                                                                                                                         1 FNNFTVSFWLRVPKVSASHLE 21
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                                Corradin G;
                                                                                                           Claim 1; Page 13; 16pp; English.
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                                                                                                                                                                                                                                                                                                                                      AAW06130 standard; peptide; 21
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                                                                                                                                                                                                                                                                                                   21; Conservative
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          (ENIE ) ENIRICERCHE SPA.
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                                Ревві А,
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                                                     WPI; 1991-141874/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Clostridium tetani
                                                                                                                                                                                                                                                                                         Best Local Similarity
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                                                                                                                                                                                                                                                       Sequence 21 AA;
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                     response against endogenous CETP activity, thereby treating or preventing a cardiovascular disease, such as atherosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hetero:dimeric polypeptide immunogen in coiled-coil configuration with different antigens on each sub:unit - useful in vaccines and for antibody
                                                                                                                                                                                  Gaps
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  elicit an immune
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rabbit cholesteryl ester transfer protein (CETP) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 112; DB 2;
Pred. No. 7.8e-12;
; Mismatches 0;
                                                                                                                                  Score 112; DB 2;
Pred. No. 7.8e-12;
Mismatches 0;
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                                                                                                                                     100.0%;
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                                                                                                        Query Match

Best Local Similarity

Local Similarity

Local Similarity

Local Similarity
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                                                                                          Sequence 21 AA;
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Best Local S
Matches 21
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Sequence 21 AA;
                                                                                                               27-MAR-1998;
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                                                                                           38-OCT-1998.
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AAW67579
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                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence represents a broad range helper T cell epitope of the tetanus protein. It can be used in DNA plasmid-based vaccines against cholesteryl ester transfer proteins (CETPS). CETPS mediate the transfer of cholesteryl esters from high density lipoprotein (HDL) to very low versa. An increased CETP activity produces an atherogenic lipoprotein profile and induces atherosclerosis. A DNA plasmid-based vaccine comprises sequences encoding at least one B cell epitope of CETP linked in frame with at least one segment encoding a broad range helper T cell epitope. The vaccines can be used to elevate the ratio of circulating HDL to circulating LDL, VLDL or total cholesterol in a human. It can also be used for decreasing the level of endogenous CETP activity in a human. The transition can be used to produce anti-CETP antibodies in vivo and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                          DNA plasmid-based vaccine encodes CETP B cell and helper T cell epitope(s) - used for elevating high density lipoprotein levels, and for treating cardiovascular disease.
                                                                                                Cholesteryl ester transfer protein; CETP; cholesteryl ester; high density lipoprotein; HDL; very low density lipoprotein; LDL; T cell epitope; antibody; DNA plasmid-based vaccine; broad range helper T cell epitope; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                         Broad range helper T cell epitope from the tetanus toxoid protein.
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                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure, Page 44; 67pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW67034 standard; peptide; 21 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           treating cardiovascular disease
        AAW46449 standard; peptide; 21
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                                                                                                                                                                                                                                                         96US-00640713
                                                    (first entry)
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Best Local Similarity 100.0
Matches 21, Conservative
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                                                                                                                                              cardiovascular disease.
                                                                                                                                                                                                                                                                                         (TCEL-) T CELL SCI INC.
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                                                                                                                                                                 Clostridium tetani
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                                                     18-MAY-1998
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                                                                                                                                                                                                                                                                                                               Thomas LJ;
                               AAW46449;
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AAW46449
                               EXEXEXE
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The invention relates to a new carbohydrate peptide conjugate, which comprises a carrier with a dendrimeric poly-lysine enabling multiple comprises to be covalently attached to it. Also claimed are: (1) an antibody purified from biological fluid or cells of organisms carbohydrate peptide conjugate, and (2) a diagnosis of troopprising antigen-specific antibodies elicited by immunisation with the carbohydrate peptide conjugate. The peptide conjugate, antibody and carbohydrate peptide conjugate. The peptide conjugate, antibody and carbohydrate peptide conjugate. The peptide conjugate antibody and conjugate tumours. These can be used to support an immune response against twinurs. They can be used to enhance immune responses, especially B- and reconjugate between the antibody and T-cell aresponse, of humans and animals against bacterial infections. The carbohydrate peptide conjugate stimulates the antibody and T-cell carbohydrate peptide conjugate stimulates the munians and carbohydrate sequence corresponds to residues 947-967 of tetanus town. The synthetic peptide corresponding to this sequence may be used to as an epitope in a carbohydrate peptide conjugate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carbohydrate peptide conjugate used as vaccine - comprises carrier with dendrimeric poly-lysine enabling multiple epitopes to be covalently
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Tetanus toxin; vaccine; antibody; carbohydrate peptide conjugate; dendrimeric poly-lysine; epitope; tumour.
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Pred. No. 7.8e-12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 13; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Leclerc C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
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                                                                                                                                                                                                                                                                                                               98WO-EP001922.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cantacuzene D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          (INSP ) INST PASTEUR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
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                                                                                                      Clostridium tetani
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Gaps

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be used in the method of the invention for inducing antibody-dependent cellular cytotoxicity (ADCC) against a tumour cell which is characterised by overexpression of HER 2/neu or epidermal growth factor receptor molecule (BGFR), comprises contacting the tumour cell with a multispecific protein molecule (preferably a single chain antibody) comprising; (a) an anti-FC receptor antibody or an antigen binding fragment; (b) a portion which binds to HER 2/neu; and (c) a portion which binds to BGFR. The method can be used for treating cancers especially breast cancer or ovarian cancer. The multispecific antibody can also be administered prophylactically to vaccinate a subject against infection by a target cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The claims detail a method for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers if.e. self-proteins, for example, human prostate specific membrane antigen (PSW), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous pystem of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 here! group which is foreign to the animal. Analogues of human PSW, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Foreign epitope, P2; prostate specific membrane antigen, PSM, Her2; Heregulin 2; Fibroblast growth factor 8b; FGF8b; vaccination; eytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Haaning J, Leach D,
                                                                                                                                                                                                                Length 21;
                                                                                                                                                                                                           100.0%; Score 112; DB 2; Length 2
100.0%; Pred. No. 7.8e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Page 214; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                               AAY92626 standard; protein; 21 AA
                                                                                                                                                                                                                                                                                 1 FUNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                   1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-DK000525.
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98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Foreign epitope P30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani.
                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAA09461.
                                                                                                                                                                                Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gautam A,
                                                                                                                                                                                                                Query Match
Best Local S:
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY92626;
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                                                                                                                                                                                                                                                                           The invention relates to the manufacture of a synthetic chimeric peptide comprising a non-typable Haemophilus influenzae fimbrin peptide fused via a linker peptide to a T-cell epitope peptide. The chimeric peptide is used in immunogenic compositions which induce an immune response against non-typable Haemophilus influenzae. This sequence represents an example of a T-cell epitope peptide used to generate the chimeric peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Multispecific single chain antibody; antibody H22; tumour cell; therapy; antibody-dependent cellular cytotoxicity; ADCC; HER 2/neu; infection; epidermal growth factor receptor; breast cancer; ovarian cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents a tetanus toxoid epitope and is recognised by the multispecific single chain antibody designated H22. The antibody can
                                                                                                                                                                                             Synthetic chimeric fimbrin peptide - useful for vaccination against non-
typable Haemophilus influenzae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Specific killing of tumour cells - using a multi-specific molecule comprising an anti-Fc receptor antibody and a portion which binds to target cell.
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                                                                                                                                                                                                                                                                                                                                                                                                                             Score 112; DB 2;
Pred. No. 7.8e-12;
; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Sco-
100.0%; Pre
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                                                                                                                                                                                                                                               Disclosure; Col 4; 16pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FINIFIVSFWLRVPKVSASHLE
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                                 95US-00460502.
                                                                  95US-00460502.
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                                                                                                                                Bakaletz LO;
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                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 21, Conservative
                                                                                                (OHIS ) UNIV OHIO STATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tetanus toxoid epitope.
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                                                                                                                                                                 WPI; 1999-044514/04.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Somasundaram C,
                                                                                                                                                                                                                                                                                                                                                                                             Sequence 21 AA;
                                                                                                                                Kaumaya PTP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-JUN-1996;
                                02-JUN-1995;
                                                                02-JUN-1995;
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   01-DEC-1998
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Dalum I;

1 FNNFTVSFWLRVPKVSASHLE 21

(first entry)

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In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                   Osteoprotegerin ligand, OPGL, osteoprotegerin, osteoclastogenesis, tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption, tetanus toxoid P30 epitope.
                                                                                                                                                          Amino acid sequence of the tetanus toxoid P30 epitope.
                                                                        AAY84428 standard; peptide; 21 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example; Page 106; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                            (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Halkier T, Haaning J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-271444/23.
                                                                                                                                                                                                                                                         Clostridium tetani.
                                                                                                                                                                                                                                                                                    WO200015807-A1
                                                                                                                                                                                                                                                                                                                                         13-SEP-1999;
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                                                                                                                                                                                                                                                                                                                                                                                   02-OCT-1998;
                                                                                                                                25-JUL-2000
                                                                                                                                                                                                                                                                                                               23-MAR-2000
                                                                                                     AAY84428;
                                                RESULT 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is a tetanus toxin T cell epitope known as Helper Peptide P30. Hybrids of this peptide and an immunogenic peptide derived from tumour rejection antigen precursor MAGE-10 were used to generate polyclonal antiserum against MAGE-10. MAGE-10 binding monoclonal antibodies can be used to detect MAGE-10. Expression. A correlation between MAGE-10 expression and cancer has been discovered and thus by determining the presence of MAGE-10, the presence of cancer can be determined. MAGE-10 expression can be detected using an immunoassay, an oligonuclectide hybridisation assay or via other standard techniques. This method is especially useful for determining the presence of bladder, ossophageal, head and neck, prostate or lung cancer, or melanoma, myeloma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Determining presence of cancer in samples, especially useful for detecting bladder, prostate and lung cancer comprises assaying sample for expression of tumor rejection antigen precursor MAGE-10.
epitope (e.g. P2 and/or P30) are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively
                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                 Human; MAGE-10; tumour rejection antigen precursor; bladder cancer; prostate cancer; lung cancer; cancer detection; oesophageal cancer; head and neck cancer; melanoma; myeloma; sarcoma; immunogen; tetanus toxin.
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                                                                                    Length 21;
                                                                                                                Indels
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                                                                                 100.0%; Score 112; DB 3;
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                         Tetanus toxin I cell epitope helper peptide P30.
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                                                                                                                                          21
                                                                                                                                                                 21
                                                                                                                                                                                                                                      AAY99876 standard; protein; 21 AA
                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LUDW-) LUDWIG INST CANCER RES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00183714.
                                                                                                                                                                                                                                                                                            03-OCT-2000 (first entry)
                                                                                                             21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-451624/39.
                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boon-Falleur T,
                                                     Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200026407-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-MAY-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-OCT-1999;
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                                                                                 Query Match
Best Local S
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Matches
                                                                                                                                                                                                             RESULT 9
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99WO-DK000481. 98DK-00001164 98US-0102896P

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The present sequence represents the tetanus toxoid P30 epitope. It is used to create a fusion protein with murine osteoprotegerin ligand (OPGL) Osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II cransmembrane protein. The murine and human OPGL polypeptides are 87% homologous. OPGL is a potent osteoclast differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast continuous of differentiation in the absence of CSF-1. OPGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL polypeptide or subsequence, and/or at least one OPGL polypeptide or subsequence, and/or at least one OPGL analogue to induce an immune response in the animal. The method and OPGL colypeptide are useful for treating, preventing and ameliorating oblypeptide are useful for treating, preventing and ameliorating oblypeptide or subsequence of capacitics of conditions characterised by excessive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Conservative
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bone resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 21 AA;
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AAY49260
ID AAY49
XX
AC AAY49
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1 FNNFTVSFWLRVPKVSASHLE

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Gaps

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Indels

100.0%; Score 112; DB 3; 100.0%; Pred. No. 7.8e-12; live 0; Mismatches 0;

Query Match
Best Local Similarity 100.0
Matches 21, Conservative

Length 21;

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                             proteins and their coding sequences to down regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amyloid protein; neuroprotective; nootropic; immunostimulant; vaccine; Alzheimer's disease; anticonvulsant; gene therapy; Pick's disease; antidiabetic; systemic amyloidosis; maturity onset diabetes; ALS; amyctrophic lateral sclerosis; Parkinson's disease; encephalopathy; Huntington's disease; fronto-temporal dementia; P30 epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           In vivo down-regulation of amyloid protein for the treatment of Alzheimer's, comprises presenting an amyloidogenic polypeptide or its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                   The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 ({\rm Lb}-5) analogues and modified {\rm Lb}-5
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100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
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19-APR-2000; 2000WO-DK000205.
                                       99DK-00000552.
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01-MAR-2000; 2000US-0186295P.
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                                                                                               (MEBI-) M & E BIOTECH AS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             helminthic infections
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-589796/66.
N-PSDB; AAD18756.
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                                       23-APR-1999;
06-MAY-1999;
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                                                                                                                                        Klysner S;
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Best Local S:
Matches 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention provides carrier proteins comprising at least 5 CD4+ T cell epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonucleotides molecules that encode peptide epitopes; (b) annealing the oligonucleotides to form duplexes; (c) introducing the duplexes into an expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a culture of the host cells. The carrier protein can be used as a protective immunogen in the control of diseases caused by encapsulated bacteria. Sequences AAY49256-266 represent CD4+ T cell epitopes inserted in the recombinant polyepitope carrier proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carrier proteins containing CD4+ epitopes useful for protecting against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                         Carrier protein; CD4+; T cell epitope; N6; N10; N19; immunogen; encapsulated bacteria.
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Pred. No. 7.8e-12;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 36; 76pp; English.
                                                       CD4+ T cell epitope P30TT fragment
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100.0%; Pr
tive 0;
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                (first entry)
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                                                                                                                                                                                                                                                                                                                                                     (CHIR-) CHIRON SPA.
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                07-FEB-2000
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                                                                                                                                                       Synthetic.
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AAB45512

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The invention relates to a method for in vivo down-regulation of amyloid protein such as beta amyloid (Abeta) in an animal, including human. The method comprising presenting to the animal's immune system an immunogenically effective amount of at least one amyloidogenic protein or its subsequence and/or at least one analogue of the amyloidogenic protein or its subsequence, and its polypeptide. The amyloidogenic protein or its subsequence, and its comprising an adjuvant for the preparation of an immunogenic composition comprising an adjuvant for down-regulating amyloid in an animal. They are also useful in the treatment, prophylaxis or amelioration of Alzheimer's disease or other diseases characterised by amyloid deposits. They are also useful in the treatment of systemic amyloidosis, maturity onset dementa, amytorophic lateral sclerosis (ALS), Pick's disease and prionrelated transmissable spongiform encephalopathies. They are also useful for inducing production of antibodies against an amyloidogenic complete.
 subsequence and/or at least one analogue of the amyloidogenic polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amyloid disease, amyloid fibril deposition, amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; escitive seystem amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; creutzfeld-Jakob disease; Kurh; haemodialysis-asssociated beta-2-microglobulin deposition; carrier protein; universal T-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
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                                                        Example 3; Page 118; 120pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                  related to the invention
                   to the immune system.
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Gaps

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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a prognosis of amyloid component. A patient serum immunoreactivity against a component amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity of at least four times a base line serum immunoreactivity against a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a prognosis of disorders characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by anyloid dosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by ATTR fibrils derived from serum amyloid axionyopathy characterised by fibrils derived from serum amyloid axionyopathy characterised by anyloid obsis, and beta-2-microalosis, kuru) characterised by chion protein deposits, and beta-2-microalosis, characterised by prion protein deposits, and beta-2-microalosis, characterised by prion protein deposits, and beta-2-microalosis, characterised by creating expense and pamilial amyloid dosis and earlier of long term haemodialysis treatment. The present sequence creating a universal T-cell epitope which may be used as a carrier for the invention
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antibody.

Disclosure; Page 43; 140pp; English.

Best Local Similarity

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disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to abeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreceptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to compositions for stimulating the immune system and for treating malignancies associated with overexpression of the HBR-2 proteins. The compositions comprise immunogenic groups of the HBR-2 proteins. The present sequence is one such peptide used in the compositions of the present invention. The compositions can be used for treating cancer, e.g. breast, ovarian, lung, prostate and colon cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Compositions comprising polypeptides and polynucleotides for stimulating the immune system and for treating malignancies associated with overexpression of the HER-2 protein.
                                                    This invention describes a novel method of preventing or treating a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cytostatic; immune response; HER-2; human; epitope; cancer; breast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Triozzi PL;
                Disclosure; Page 28; 143pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB68637 standard; peptide; 21 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                               1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                        100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HER-2 B cell peptide P30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stevens VC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (OHIS ) UNIV OHIO STATE
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                                                                                                                                                                                                                                                                                                       Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kaumaya PT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB68637;
                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                           Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB68637
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100.0%; Score 112; DB 4; Length 21;

21 AA;

Sequence

Query Match

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Gaps

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Indels

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21 21

Length 21;

Score 112; DB 4; Pred. No. 7.8e-12; Mismatches

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a bispecific molecule (I) comprising specific binding sites for an Fealpha receptor and an epidermal growth factor (EGF) receptor. It also provides bispecific molecule (II) comprising a human antibody, preferably a single chain antibody, specific for an Fealpha receptor and defect for an epecific binding sites for an Fealpha receptor and a HER2 receptor; (3) a multispecific binding sites for an Fealpha receptor and a HER2 receptor; (3) a receptor, HER2 receptor and EGF receptor; (4) a multispecific molecule (IV) comprising specific binding sites for Fealpha receptor, and receptor, and receptor, and receptor and EGF receptor, (4) a multispecific molecule (V) comprising a human antibody specific for an Fealpha receptor, a human antibody specific for an EGF. (I)-(V) can be used for inducing effector cell killing of tumour cells. The molecules can be used to treat or revent viral, protezoal, or fungal infections, or autoimmune diseases such as immune thrombocytopenia purpura and systemic lupus erythemmans.
                                                                                                                                                                                                                                                                                                                             Fcalpha receptor; epidermal growth factor; EGF; HER2 receptor; tumour; immune thromboortopenia purpura; systemic lupus erythematosus; vaccine; cytostatic; antivital; protozoacide; antifungal; immunosuppressive; antiinflammatory; dermatological; hemostatic; tetanus toxoid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bispecific molecule comprising specific binding sites for an Fc-alpha receptor and an epidermal growth factor, used to induce effector cell killing of tumor cells.
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                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 4; Length 21; 100.0%; Pred. No. 7.8e-12; ive 0; Mismatches 0; Indels
                   Indels
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Graziano R, Keler T;
                                                                                                                                                                                                                                                                                             Tetanus Toxoid universal Th epitope TT947.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 7; Fig 24; 183pp; English.
                                                       21
                                                                                                                                                                                  AAB61958 standard; peptide; 21 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FINETVSFWLRVPKVSASHLE 21
                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
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                                                     1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-JUL-1999; 99US-00364088.
10-MAR-2000; 2000US-00523279.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-JUL-2000; 2000WO-US020158
                                                                                                                                                                                                                                                           (first entry)
                 21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goldstein J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-123318/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MEDA-) MEDAREX INC.
                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200109186-A2.
                                                                                                                                                                                                                                                         14-MAY-2001
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                                                                                                                                                                                                                        AAB61958;
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                    Matches
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                                                                                                                                                RESULT 17
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us-09-806-703a-14.rag

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HER 2/neu; epidermal growth factor receptor; EGPR; multispecific protein; Fc receptor; FCR; tumor cell; breast, cancer; sarcoma; carcinoma; HIV; pathogenic; Toxoplasma gondii, candidiasis; systemic lupus; cytostatic; immune thrombocytopenia purpura; immunosuppressive; antiviral; antifungal; antiprotozoal; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inducing killing of tumor cells which expresses HER 2/neu or epidermal growth factor receptor (BGFR) by contacting the cell with multispecific proteins comprising an anti-Fc receptor, -Her 2/neu or -EGFR antibody, useful for treating cancer.
                                                                Universal tetanus toxin Th epitope TT947-967.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 7; Col 29; 57pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95US-00484172.
96US-00661052.
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(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-475189/51.
                                                                                                                                                                                                                                                                                                                                                                 Clostridium tetani.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                  US6270765-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-JUN-1995;
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25-SEP-2001
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NAME OF COLORS OF STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREET STREE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence is that of the promiscuous tetanus toxic T-cell epitope P30. It is an object of the invention to produce a recombinant therapeutic vaccine capable of effecting down-regulation of growth differentiation factor 8 (GDF-8) in order to increase the muscle growth differentiation factor 8 (GDF-8) in order to increase the muscle growth care capable of breaking autocolerance against autoclogous GDF-8.

These comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as the comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as the comprise the C-terminal region limits the possible sites in which the T-cell epitope can be positioned without major disturbance of the comprise and positioned without major disturbance of the animals. Down-companies and poultry can increase muscle mass by up to at least companies in pigs and poultry used for meat production, reducing the companies of pigs and poultry used for meat production, reducing the companies of the animals. Down-companies and poultry used for meat production, reducing the companies such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                  Tetanus toxin, T-cell epitope, growth differentiation factor 8, GDP-8, myostatin; down-regulation; vaccine; muscle; meat; cachexia; cardiant.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure, Page 95; 110pp; English.
                                                         AAB20144 standard; peptide; 21 AA.
                                                                                                                                                                                                                                                                          Tetanus toxin T-cell epitope P30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99DK-00001014.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-2000; 2000WO-DK000413.
                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MEBI-) M & E BIOTECH AS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium tetani,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200105820-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-JUL-1999;
26-JUL-1999;
                                                                                                                                                                                                         30-APR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Halkier T,
                                                                                                                                 AAB20144;
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Best Local S
Matches 21
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                      AAB20144
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Somasundaram C;

Graziano R,

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The invention relates to a new method for inducing killing of a tumor cell which expresses HER 2/neu or epidermal growth factor receptor teGER). The method comprises contacting the tumor cell with a multiapecific protein comprising a component, preferably an antibody, which binds to an Pc receptor (PcR), Her 2/neu or EGFR. The method is useful for inducing killing of a tumor cell from breast cancer, sarcoma, carcinoma, or ovarian cancer. Specific multispecific proteins can also be administered to a subject to treat or prevent other diseases or conditions, including pathogenic infections (e.g., viral (such as HIV)), protozoan infections (such as Toxoplasma gondii), fungal infections (such as candidlasis), and an autoimmunity (e.g. immune thrombocytopenia purpura and systemic lupus). The present sequence represents an universal tetanus toxin Th epitope TT947-967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVac1; ViVac2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 112; DB 4;
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amino acid sequence of P30 epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB85702 standard; peptide; 21 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plasmodium vivax.
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AAB85453 standard; peptide; 21 AA.

RESULT 19

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AAB85453

AAB85453;

1 FNNFTVSFWLRVPKVSASHLE 21 FINITUSFWLRVPKVSASHLE 21

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The invention relates to an immunogen comprising at least one first antigenic determinant that includes at least one B-cell epitope and/or at least one eyctoxic Tlymphocyte (CTL) epitope, and at least one second antigenic determinant that includes a T helper cell epitope (TH epitope), where each of the first and second antigenic determinants are coupled to an activated polyhdroxypolymer carrier. The invention also relates to an immunogenic composition for raising an immunogen or immunogenic composition in a mammal, including a human. The immunogen or immunogenic composition contained in a virtual lymph node (VLN) device is useful for immunising an animal, including a human, against an antigen of choice, where the antigen shares at least one first antigenic determinant with the immunogen. This sequence represents a T helper cell epitope used in synthesis of an immunogen of the invention
                                                                                                                                                                                                                                                    Novel immunogen useful for immunizing an animal, has an activated polyhydroxypolymer backbone to which is attached an antigenic determinant including a B cell epitope and another determinant including a T-helper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer;
Tetanus toxoid precursor peptide; tentoxylysin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxoid precursor peptide, tentoxylysin, #2.
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                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page 51; 52pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                20-FEB-2001; 2001US-00785215.
20-AUG-2001; 2001DK-00001231.
22-OCT-2001; 2001US-0337543P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21; Conservative
                                                                                                                                                           Koefoed P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Grimes S, Michaeli D,
                                                                                                             (PHAR-) PHARMEXA AS
                                                                                                                                                                                                         WPI; 2002-706932/76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (APHT-) APHTON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-MAR-2002
                                                                                                                                                           Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-NOV-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU11415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                           epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to recombinant multivalent proteins (I) that
stimulate an immune response to Plasmodium vivax. (I) comprises antigenic
determinants, fragments or conservative substitutions, derived from more
than one stage in a life cycle of a Plasmodium vivax parasite. (I) is
c useful as a vaccine for stimulating an immune response, specifically a
protective immune response that confers increased resistance to infection
by Plasmodium parasites, such as P. vivax. (I) is especially useful in
the treatment, prevention and reduction of malarial infection, as
c the treatment, prevention and reduction of malarial infection, so
c the treatment of supple, and for conferring immunity against multiple
c stages of the malarial parasite. The antibodies produced are useful for
the detection or measurement of antigenic epitopes derived from one or
c more stages in a life cycle of a parasite, particularly P. vivax. The
c vaccine comprising the recombinant proteins, is cost-effective, health-
c promoting intervention for controlling, preventing or treating the
c incidence of malaria. The present sequence represents the amino acid
c sequence of a P30 epitope, a component of the multivalent and multistage
c proteins vivaclp and vivac2p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                         New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunogen; B-cell epitope; cytotoxic T lymphocyte; CTL; TH epitope;
I helper cell epitope; virtual lymph node device.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                    (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 25; 59pp; English.
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                                                                                                             29-JAN-2001; 2001WO-US002937
                                                                                                                                                      31-JAN-2000; 2000US-0179213P.
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                                                                                                                                                                                                                                                  Xiao L, Zhou Z;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T helper cell epitope #2.
                                                                                                                                                                                                                                                                                                WPI; 2001-514557/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani
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                   WO200155181-A2
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                                                               02-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABG31775;
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                                                                                                                                                                                                                                                  Lal AA,
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Matches
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Length 21; Indels

Score 112; DB 5; Pred. No. 7.8e-12; ; Mismatches 0;

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Disclosure; Page 120; 122pp; English.
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Best Local Similarity 100.
Matches 21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                      Sequence 21 AA;
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Matches
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                                                                                                                                                                                                         The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GRRH also known as luteinishing hormone releasing hormone, LHRH; comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GRRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer, prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is Tetanus toxoid precursor peptide, tentoxylysin, a promiscuous helper T-cell peptide epitope used in the immunogen of the invention
                                                                                      gonadotropin releasing hormone, comprises fusion peptide having
promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxoid; epitope; amyloid precursor protein; APP; beta amyloid; vaccine; genetic immunisation; nootropic; neuroprotective; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                 synthetic immunogen for inducing immune response against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Degan FD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 112, DB 5,
Pred. No. 7.8e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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                                                                                                                                                                          Disclosure; Page 29; 43pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
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22-OCT-2001; 2001US-0337543P.
16-APR-2002; 2002DK-00000558.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Conservative
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N-PSDB; ABZ81993.
                      WPI; 2002-049440/06.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 21 AA;
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                                                               Novel
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                        epitope P30. Targetion provides methods for compositions for combatting diseases characterised by deposition of amyloid, such as Alzheimer's disease. Immunisation is preferrably effected by administration of analogues of autologous amyloid precursor protein (APP) or beta amyloid (Abeta), the analogues being capable of inducing antibody production against the autologous amyloidogenic polypeptides. Especially preferred as an immunogen is autologous Abeta which has been modified by introduction of one or a few foreign, immunodominant and promiscuous Teell epitopes, such as tetanus toxoid P30 epitope. Genetic immunisation against APP or Abeta and vaccination using live vaccines are also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a synthetic chimeric fimbrin peptide. The peptide is useful for treating a non-typable Haemophilus influenzae (NTH1) infection and otitis media. The synthetic peptides do not require tedious purification techniques. The present sequence represents the amino acid sequence of a Clostridium tetani T-cell epitope #4.
The present sequence is the protein sequence of tetanus toxoid T-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 6;
100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
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100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADA25170 standard; peptide; 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C. tetani T-cell epitope #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kaumaya PTP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21; Conservative
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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least 1 modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a tetanus toxoid (TT) P30 epitope that can be introduced into a CEA polypeptide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                        Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                         presenting cell;
                                                   CEA, immune response; carcinoembryonic antigen; antigen pre
APC; cytostatic; vaccine; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BCG; T-cell; epitope; gastrointestinal; antiulcer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 7; 100.0%; Pred. No. 7.8e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 140; 140pp; English.
                   Tetanus toxoid P30 epitope sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADC09977 standard; peptide; 21 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FUNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                           2002DK-00000082.
2002US-0350047P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-FEB-2002; 2002US-0360134P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus toxoid TT947-967,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21; Conservative
                                                                                                                                                                                                                                                                                                                                                   Klysner S, Voldborg
                                                                                                                                                                                                                                                                                                                 (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-587260/55.
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Matches 21; Conser
                                                                                                          Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2003072040-A2.
                                                                                                                                               WO2003059379-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 21 AA;
                                                                                                                                                                                                                                                           17-JAN-2002;
17-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-DEC-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TWF, TWFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a tetanus toxoid epitope peptide. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                         Multimeric protein; interleukin 5; IL5; TNPalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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100.0%; Pred. No. 7.8e-12;
Mismatches 0;
                                                                                                                                                                                                                                        Tetanus toxoid epitope (P30) peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; Page 107; 196pp; English
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FNNFTVSFWLRVPKVSASHLE 21
                    1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                          AAO30455 standard; peptide; 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABR82483 standard; peptide; 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KLYSNER S.
NIELSEN F S.
BRATT T.
VOLDBORG B.
MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-449558/42.
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                 tetanus toxoid.
                                                                                                                                                                                                    22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                 Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                          22-MAY-2003.
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                                                                                                                                                                AAO30455;
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(KLYS/)
(NIEL/)
(BRAT/)
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(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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ABR82483
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Gaps

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Synthetic
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                                                                                                                                                                                                                                                                                           RESULT 29
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                                                                                                                                                                                                                                                                                                                 셤
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                                                                                                                                                               The present sequence is that of a universal T-cell epitope comprising amino acids 947-967 of teranus toxoid. Universal T-cell epitopes such as this can be used as carriers of peptide agents of the invention that bind alpha-4 integrin or a dimer comprising an alpha-4 integrin subunit.

Linkage to a carrier will improve the immune response to a peptide that may be too small to be immunogenic on its own. A method of Ghronically comprising a patient's pathological inflammation involves administration of an agent that specifically binds to an alpha-4 integrin or a dimer comprising alpha-4 integrin. The agent is administration and anintains alpha-4 integrin receptor saturation to chronically suppress pathological inflammation in the patient. The pathological inflammation in the patient. The pathological inflammation is caused by inflammatory disease of the gastrointestinal tract, such as Crohn's disease, ulcerative collisis or inflammatory bowel disease, or is caused by multiple sclerosis (all claimed).
                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                     Preventing and/or reducing pathological inflammation by administration of an agent inhibiting alpha-4 integrin or its dimer, useful in treating multiple sclerosis, Crohn's disease, ulcerative colitis or inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel synthetic chimeric fimbrin peptide LB1 or LB2 comprising a first
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 7; Length 21; 100.0%; Pred. No. 7.8e-12; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fimbrin; T cell epitope; vaccine; otitis media; auditory;
                                                                                                                                             Disclosure; Page 17; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                  1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADC89659 standard; peptide; 21 AA
                                                                                                                                                                                                                                                                                                                                                                                                                               1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-AUG-2002; 2002US-00223711
23-APR-2002; 2002US-0374501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-00148711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C. tetani T cell epitope #4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kaumaya PTP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                            21; Conservative
                    (ELAN-) ELAN PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (BAKA/) BAKALETZ L O.
(KAUM/) KAUMAYA P T P.
                                           Yednock TA;
                                                                 WPI; 2003-712654/67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-810881/76.
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                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antiinflammatory.
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                                                                                                                                                                                                                                                                                                                                                  Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-SEP-1998;
                                           raylor J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADC89659;
                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                  Best Local
                                                                                                                        bowel
                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADC89659
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                                                                                                                                                           The invention relates to a synthetic chimaeric fimbrin peptide LB1 or LB2 comprises a first peptide unit derived from H. influenzae fimbrin, a second peptide unit containing a reall epitope and a third linker peptide which connects the first peptide to the second. The chimaeric peptide is useful for inducing an immune response in animals against nontypable Haemophilus influenzae (NTHi) and for preventing or reducing adherence of NTH to host cells thereby preventing or reducing the severity of otitis media. The present sequence is a clostridium tetani T cell epitope for use in the chimaeric peptides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes a method for reducing pain or increasing the threshold for nociception in an individual comprising administering an agent capable of inducing an active immune response that trargets the individual's autologous tumour necrosis factor alpha (TNFalpha). The agent has analgesic activity, and can be used in a vaccine against autologous TNFalpha. The method is useful in reducing pain or increasing the threshold for nociception in individual. The method is especially intended for reducing neuropathic pain. The present sequence represents
peptide unit and third linker reducing severity of otitis media.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pain reduction; nociceptive; nociceptor; immune response; tumour necrosis factor alpha; TNFalpha; analgesic; vaccine; pain; neuropathic pain; tetanus toxoid; epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tetanus toxoid P30 epitope SEQ ID NO:3.
      epitope as second
for preventing or
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                                                                                                      Claim 10; SEQ ID NO 8; 15pp; English
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2002US-0363128P.
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Best Local Similarity 100.
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ebert B,
      peptide unit, T cell
peptide unit, useful
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 21 AA;
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11-MAR-2002;
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The invention relates to a process for selecting ligands (A) of HLA with a labelled peptide (I) in presence of different concentrations of test compounds; (b) separating complexes formed; (c) determining DP4-(I) cemplexes by measuring a signal from the label; and (d) selecting complexes by measuring a signal from the label; and (d) selecting compounds having binding ICSO less than 1000 nM, corresponding to the concentration required to inhibit 50 % binding of (I). (I) has signal-to-noise ratio over 5, at 10 nM, in a direct binding test to DP4. (A) cause concentration over 5, at 10 nM, in a direct binding test to DP4. (A) cause them, are useful as immunomodulators, including uses in vaccines against pathogens and tumor cells, also for treating autoimmune diseases (multiple sclerosis and type I diabetes), allergy and graft rejection. (A) are useful as reagents for diagnosing the immune status of an individual, while labelled complexes of DP4 with (A) are used to select antigen-specific CD4+ T cells. The method identifies ligands specific for HLA-DP4 and allows exact definition of the binding motif shared by DP4 chinding ligands. This sequence represents an example of a peptide ligand of the invention. The peptides are labelled (biotinylated) at their N-
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tetanus toxoid P30 epitope, which is given in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Process for selecting ligands for human leukocyte antigen DP4, useful immunomodulators for treating e.g. tumors, based on inhibition of
                                                                                                                                                                                                                                                                                                                                                                                                                                cytostatic; immunostimulant; immunosuppressive; neuroprotective; antidabetic;, antiallergic; ligand; HLA-DP4; human leukocyte antigen; immunomodulator; vaccine; pathogen; tumor cell; multiple sclerosis; diabetes; allergy; graft rejection.
                                                                                                                          Gaps
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                                                                                       Length 21;
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(SEDA-) SEDAC THERAPEUTICS SOC ETUD DEV ANTIGENE.
                                                                                     Score 112; DB 7;
Pred. No. 7.8e-12;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                            HLA-DP4 binding peptide ligand #1.
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                                                                                   100.0%;
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                                                                          Query Match
Best Local Similarity 100.0
Marches 21; Conservative
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                  invention.
                                                  Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antigenic peptides derived from WT1 which induce HLA-A24 restricted cytotoxic T-lymphocytes for production of cancer vaccine and treatment
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                            Gaps
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Score 112; DB 7;
Pred. No. 7.8e-12;
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0; Mismatches
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100.0%;
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(SUMU ) SUMITOMO PHARM CO LID.
(SUGI/) SUGIYAMA H.
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2002JP-00275572.
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            Local Similarity
hes 21; Conserv
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20-SEP-2002;
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  Query Match
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Sequence 21 AA;

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This invention relates to a novel immunogenic composition comprising an In-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 capanences as having a similar conformational shape to native human IL-13 capanence as having a similar conformational shape to native human IL-13 capanence as having a similar conformational shape to native human IL-13 capanence and manial species, to enhance its immunogenicity. Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), the method results in a reduction in airway hyper-responsiveness (AHR). The airways and skin irritation, as well as reducing the requirement for inhaled corticostercides (ICS). As such, these compositions, which exhibit corticostercides (ICS). As such, these compositions, which exhibit to treat individuals suffering from or susceptible to chronic obstructive confinence is a T-cell peptide epitope fused to IL-13 to create an
                                                      immunogenic, IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
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100.0%; Pred. No. 7.8e-12;
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          Fetanus toxin P30 peptide T-cell epitope.
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28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                                    28-AUG-2003; 2003WO-GB003729
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GLAX ) GLAXO GROUP LTD.
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                                                                                                                                                                                                                                              Clostridium tetani.
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                                                                                                 immunogenic; IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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100.0%; Pred. No. 7.8e-12;
iive 0; Mismatches 0;
                                                      Tetanus toxin P30 peptide T-cell epitope.
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28-FEB-2003; 2003GB-00004672.
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03-JUN-2004 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GLAX ) GLAXO GROUP LTD. (ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ellis JH;
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Length 21; Indels 25-MAR-2004

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ghrelin, autologous ghrelin, ghrelin analogue, immunogen, immunisation, anti-ghrelin antibody, obesity, anorexia, cachexia, wound, burn, adjuvant therapy, in vitro fertilisation; ghrelin-related cancer, ghrelin receptor-related cancer, anorectic, cytostatic, metabolic, immunomodulator; vulnerary; vaccine, tetanus toxin, P30 epitope,
 asthma; chronic obstructive pulmonary disease; COPD; atopic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                  hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; T-helper epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 8; I
100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; SEQ ID NO 34; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tetanus toxin P30 epitope, SEQ ID NO:8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADM06895 standard; protein; 21 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FINNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                28-AUG-2003; 2003WO-GB003721
                                                                                                                                                                                                                                  30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 100.
168 21; Conservative
                                                                                                                                                                                                                                                                                       (GLAX ) GLAXO GROUP LTD.
                                                                                                                                                                                                                                                                                                                           Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-239126/22
                                                                                        Clostridium tetani.
                                                      tetanus toxin; P30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clostridium tetani
                                                                                                                          WO2004019979-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 21 AA;
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                                                                                                                                                                11-MAR-2004
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the invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a ghrelin analogue comprising a ghrelin becell epitope and non-ghrelin chemical moieties to the immune system, thereby inducing the production of antibodies against the compositions comprisitions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; a motelic acid encoding a ghrelin analogue of the invention; a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or ameliorating obesity or other conditions of characterised by excess body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for upregulating ghrelin for the treatment, prevention or amelloration of anorexia or cacharin. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      may also be used for treating wound or burns, in adjuvant therapy for in vitro fertitilisation, and for treating opterlin and ghrelin-receptor related cancers. The present sequence represents the tetanus toxin P30 epitope, a promiscuous T-cell epitope, which may be used in ghrelin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                       Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin
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100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amino acid sequence of synthetic peptide #1.
                                                                                                                                                                                                                                                                                                                                 Example 2; SEQ ID NO 8; 83pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADO43876 standard; peptide; 21
                                    12-SEP-2003; 2003WO-DK000592.
                                                                     12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               analogues of the invention.
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                                                                                                                                                                 Klysner
                                                                                                                             (PHAR-) PHARMEXA AS
                                                                                                                                                                                                    WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
es 21; Conserv
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                                                                                                                                                                 Boving TEG,
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Disclosure; SEQ ID NO 10; 78pp; English.

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cysteine residue is substituted with another anim acid residue. The WTI substitution peptides have CTL induction activity. Peptides of the invention are used in cancer vaccines, which are applicable in the treatment of e.g. stomach cancer, prostate cancer and ovarian cancer. The present peptide represents a peptide that is mentioned in the
                                                                                                                                                                     Novel WTI substitution peptides with cysteine replaced by specific amino acid residue and their encoded polynucleotide for cancer vaccines with CTL induction activity for treatment of e.g. stomach cancer and prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                  Nakatsuka M;
                                                                                                                                                                                                                                                                       specification describes WT1 substitution peptides, in which a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiparkinsonian; antibody therapy; Lewy body; alpha-symuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                     Length 21;
                                                                                                                  Kusunose N,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 8;
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                  Samizo F,
                                                                                                                                                                                                                                            Disclosure; Page 18; 65pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tetanus toxoid amino acids 947-967.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                 Takasu H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADP02877 standard; peptide; 21
                                                                        LTD.
19-SEP-2003; 2003WO-JP011974.
                             20-SEP-2002; 2002JP-00275264.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-2002, 2002US-0423012P
                                                       (CHUS ) CHUGAI SEIYAKU KK.
(SUMU ) SUMITOMO PHARM CO
(SUGI/) SUGIYAMA H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
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                                                                                                               Sugiyama H, Gotoh M,
                                                                                                                                          WPI; 2004-295379/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Masliah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                        Sequence 21 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                 cancer
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Matches
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                                            The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to amino acids 947-967 of the tetamus toxoid protein used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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                                                                                                                                                                                                                                                                                                                                                       Length 21;
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Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-411388/38.
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                                                                                                                                                                                                                                                                                                                  Sequence 21 AA;
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The intention features to a method of synthesizing dismostratives of a carbohydrate dendrimer (CD) conjugate having a specific structure

C residue of an immunomodulating substance. (CD) is useful in the

production of antibodies, as a trageting compound, in medicine, in

inhibition of bacterial adhesion, inhibition of toxin action such as e.g.

Glycosphingolipid-specific VTZ toxins and other such bacterial toxins

with binding activities toward cell-surface carbohydrates of the host, or

inhibition of carbohydrate-mediated virus entry into host cells, in

diagnostic assays, in assays for the detection of antibodies against E,

and in high-throughput screening. (CD) are useful for treating and/or

preventing bacterial diseases such as e.g. infection with bacteria, viral

diseases such as infection with HIV, hepatitis or influenza, fungal

diseases and certain types of cancer such as carcinomas or melanomas. The

method enables fast and efficient synthesis of dendrimer conjugates

having a well-defined chemical structure. This sequence corresponds to a
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against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to the tetanus toxoid peptide corresponding to amino acid 947-967 used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antibacterial; virucide; fungicide; hepatotropic; anti-HIV; cytostatic; vacchis; bacterial adhesion inhibitor; toxin action inhibitor; carbohydrate dendrimer; immunomodulating substance; HIV; hepatitis; influenza; fungal disease; cancer; carcinoma; melanoma; poliovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthesizing chemoselectively carbohydrate dendrimer conjugate having carbohydrate residue and immunomodulating substance, by identifying chemoselective and carbohydrate residue, and binding residues to
                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a method of synthesizing chemoselectively a
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                                                                                                                                                                                                                   Length 21;
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                                                                                                                                                                                                                   Score 112; DB 8;
Pred. No. 7.8e-12;
                                                                                                                                                                                                           100.0%; Score 112, ___ 100.0%; Pred. No. 7.8, +ive 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADO24821 standard; peptide; 21 AA.
                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                             21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Boas U;
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                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004041310-A1.
                                                                                                                                                                          Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Heegaard P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-MAY-2004.
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                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                             Matches
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                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
        88888888888
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a novel method of generating a population of reclls specific for an antigen comprising isolating a population of substantially marure antigen presenting cells (APC), co-incubating the substantially marure APC population with a population of CD4+ T-cells and a target antigen for a time and under conditions sufficient to generate CD5+ T-cells specific for the antigen. The method of the invention has virucide, antibacterial, protozoacide, and cytostatic activity, and may have a use in cell therapy. The present sequence represents tetanus toxoid p30 peptide (t1947-967).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Generating a population of T-cells specific for an antigen comprises co-
incubating the substantially mature APC population with a population of
CD4+ T-cells, a population of CDS+ T-cells and a target antigen.
                                                                                                                                                                                                                                                                                                                                      T-cell; antigen; antigen presenting cell; APC; CD4+; CDS+; virucide; antibacterial; protozoacide; cytostatic; cell therapy; tetanus toxoid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                      Gaps
tetanus toxoid peptide sequence used in the method of the invention.
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                                                                                     Indels
                                                         Length
                                                        Score 112; DB 8;
Pred. No. 7.8e-12;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 8;
100.0%; Pred. No. 7.8e-12;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ORDE-) ORDER OF SISTERS OF MERCY IN QUEENSLAND.
                                                                                                                                                                                                                                                                                                          Tetanus toxoid p30 peptide SEQ ID NO:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; SEQ ID NO 1; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADP48562 standard; peptide; 21 AA.
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                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                  1 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                     ADP04308 standard; peptide; 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FINETVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 FNNFTVSFWLRVPKVSASHLE
                                                         100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-DEC-2003; 2003WO-AU001647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-DEC-2002; 2002AU-00953238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.vv
Best Local Similarity 100.vv
                                                                                                                                                                                                                                                                               (first entry)
                                                                      Similarity 100.
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Turtle CJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-468864/44.
                                                                                                                                                                                                                                                                                                                                                                                                                              WO2004053113-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 21 AA;
                              Sequence 21 AA;
                                                                                                                                                                                                                                                                               09-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hart DNJ,
                                                                                                                                                                                                                                                  ADP04308;
                                                         Query Match
Best Local S
                                                                                      Matches
                                                                                                                                                                                         RESULT 40
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SYT-SSX; SS393; tumour antigen peptide; cancer vaccine; cytostatic; cytotoxic lymphocyte induction; synovial sarcoma; tumour; cytostatic; helper peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel mutant peptide of SYT-SSX origin, useful as pharmaceutical composition of cancer vaccine for inducing cytotoxic T cells, and as diagnostic of tumor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; SEQ ID NO 7; 28pp; Japanese.
                                                                  Tetanus toxin helper peptide SeqID 7.
                                                                                                                                                                                                                                                                                                                                             03-DEC-2002; 2002JP-00350633.
                                                                                                                                                                                                                                                                                                                                                                                        03-DEC-2002; 2002JP-00350633.
                                                                                                                                                                                                                                                                                                                                                                                                                                  (SATO/) SATO N.
(SUMU ) SUMITOMO SEIYAKU KK.
                     23-SEP-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-472266/45.
                                                                                                                                                                                                          Clostridium tetani.
                                                                                                                                                                                                                                                     JP2004180566-A.
                                                                                                                                                                                                                                                                                                  02-JUL-2004.
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셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a novel chimeric binding protein that is immunogenic in an animal. The chieric binding protein binds specifically to a first receptor that binds a second receptor present in an antigen of the animal, where the chimeric binding protein structure, autologous in the form of a binding site; a scaffold protein structure, autologous in the mammal, that stabilizes the 3D conformation of the binding site; and at least one tolerance breaking amino acid sequence, which is the terologous in the animal and which binds to a major histocompatibility comprises: a nucleic acid fragment that encodes the chimeric binding protein; a vector carrying the nucleic acid fragment; a transformed cell carrying the vector; a composition for inducing production of antibodies gaining an antigen in the autologous host comprising the chimeric binding protein, nucleic acid fragment and a carrier, and down-regulating a selfantigen or a cell that displays epitopes of the self-antigen in an animal. The chimeric binding protein has cytostatic activity. The chimeric binding protein is useful in preparing a vaccine against e.g. epitope peptide for use in the vaccine of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New chimeric binding protein comprising a B-cell epitope, a scaffold protein structure and a tolerance breaking amino acid sequence, useful in
                                                                                                                                                   chimeric binding protein; immunogenic; B-cell epitope; Bcaffold protein structure; major histocompatibility complex; MHC; Class II; cytostatic; vaccine; cancer; promiscuous; tetanus toxoid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 100.0%; Score 112; DB 8; Length 21; Similarity 100.0%; Pred. No. 7.8e-12;
                                                                                                           T-H tetanus toxoid epitope peptide, P30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        preparing a vaccine against e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 2; 61pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                           11-DEC-2003; 2003WO-DK000859.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-DEC-2002; 2002DK-00001893.
11-DEC-2002; 2002US-0432532P.
12-FEB-2003; 2003UK-00000198.
12-FEB-2003; 2003US-0446707P.
                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similaricy
nes 21; Conservative
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                                                                                                                                                                                                                                                                     Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                                                                                   WO2004052930-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 21 AA;
                                                           09-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mouritsen S;
                                                                                                           Promiscuous
                                                                                                                                                                                                                                                                                                                                                             24-JUN-2004
              ADP48562;
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This invention relates to novel mutant peptides derived from SYT-SSX. Specifically, it refers to a peptide SS393, which is a modified tumour antigen peptide that can be used as the active ingredient in a cancer vaccine. The present invention describes the development of mutant peptides that exhibit increased binding affinity to the HLA-A24 antigen, and as such have a favourable cytotoxic lymphocyte (CTL) induction activity. Accordingly, these peptide epitopes can be used to treat patients suffering from various tumours including synovial sarcoma, and furthermore they exhibit cytostatic activities. This peptide sequence is a helper peptide derived from the tetamus toxin, given in an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                         Gaps
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0
                                                                                                                                                                                                                                                                                                                          Length 21;
                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 8;
100.0%; Pred. No. 7.8e-12;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tetanus toxoid 947-967 epitope AN90550.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB46176 standard; peptide; 28 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                  exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                              1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                        FINITUS FWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                      21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium tetani.
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                           Sequence 21 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200072880-A2
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Gaps

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Indels

Mismatches

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Matches

21 21

1 FNNFTVSFWLRVPKVSASHLE 1 FNNFTVSFWLRVPKVSASHLE

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ADP90538 standard; peptide; 21 AA.

RESULT 42
ADP90538
ID ADP90
XX
AC ADP90

ADP90538

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This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein ARPP Meta framents in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The Alzheimer's disease
                                                                                                                                                   Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Preventing or treating disease such as Parkinson's disease characterized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fusion protein #13 for treating neurodegenerative disorder,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 4; Length 28
100.0%; Pred. No. 1.1e-11;
^^ Mismatches 0; Indels
                                                                                           Yednock T;
                                                                                                                                                                                                                  Disclosure; Page 31; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADP02901 standard; peptide; 28 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28
                                                                                           Vasquez NJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FINITIVSFWLRVPKVSASHLE
26-MAY-2000; 2000WO-US014810.
                                99US-00322289.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Masliah E;
                                                            (NEUR-) NEURALAB LID
                                                                                         Bard F,
                                                                                                                        WPI; 2001-032104/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aggregation; brain;
Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 28 AA;
                            28-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-MAY-2004
                                                                                         Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                     antibody
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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention. Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer. lies or alpha-synuclein aggregation in brain by administering induces immunogenic response against alpha-synuclein and/or Foreign epitope, P2; prostate specific membrane antigen; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen. Dalum I; Gaps ö Leach D, Length 28; Indela PSMpep010 - P30 inserted in hPSM insertion position 6. Haaning J, 100.0%; Score 112; DB 8; 100.0%; Pred. No. 1.1e-11; 0; Mismatches Disclosure; SEQ ID NO 34; 78pp; English. Nielsen KG, Example 1; Page 117; 220pp; English. Location/Qualifiers 1 FNNFTVSFWLRVPKVSASHLE 21 AAY92653 standard; peptide; 31 AA Mouritsen S, Niels Birk P, Karlsson G; 98DK-00001261. 98US-0105011P. 99WO-DK000525 6. .26 /label= P30 (first entry) 21; Conservative (MEBI-) M & E BIOTECH AS. WPI; 2000-349917/30. Local Similarity Sequence 28 AA; Lewy bodies WO200020027-A2 agent that in beta-amyloid. Homo sapiens. 05-OCT-1998; 05-OCT-1999; 20-OCT-1998; 10-AUG-2000 13-APR-2000, Steinaa L, Gautam A, Synthetic AAY92653; Query Match Peptide Best Loca Matches 45 RESULT 45 ò ö Gaps ö Length 28;

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AAY92650-55 are peptides designed which correspond to the P2 and P30
cpitopes with 5 flanking human prostate specific membrane antigen (hPSM)
amino acids in each end. The flanking amino acids correspond to the
cpitope insertion sites 6, 8 and 10. The peptides will be used in, e.g.
The claims detemin a method for inducing immune responses against weakly
immunogenic cell-associated peptide antigens (PA) such as those
associated with cancers (i.e. self-proteins), for example, hPSM,
cassociated with cancers (i.e. self-proteins), for example, hPSM,
comprises effecting simultaneous presentation by antigen producing cells
comprises effecting simultaneous presentation by antigen producing cells
(APCs) of the animals immune system of: (1) at least 1 CTL (cyctoxic T-
lymphocyte) group derived from the PA and/or at least 1 first T helper
cell group which is foreign to the animal. Analogues of human PSM, human.
Herz and human/murine PGP8b comprising a substantial part of all known
at least one foreign the plitopes of the respective PA and including
at least one foreign the plotopes (e.g. p2 and/or P30) are also
claimed. The method is used to treat prostate, prostate/breast or breast
cancer when the PA is human PSM, FGP8b and Herz, respectively
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Foreign epitope; P2; prostate specific membrane antigen; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                        Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 3; Length 3:
100.0%; Pred. No. 1.2e-11;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PSMpep011 - P30 inserted in hPSM insertion position 8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nielsen KG, Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Page 117; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 FNNFTVSFWLRVPKVSASHLE 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92654 standard; peptide; 31 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 FUNFTVSFWLRVPKVSASHLE 21
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Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-DK000525
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/label= P30
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Best Local Similarity 100.0
Matches 21, Conservative
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                                                                                                                                                                                                                                                                                                                                                                    Sequence 31 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92654;
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AAY92650-55 are peptides designed which correspond to the P2 and P30
epitopes with 5 flanking human prostate specific membrane antigen (hPSM)
anino acids in each end. The flanking amino acids correspond to the
epitope insertion sites 6, 8 and 10. The peptides will be used in, e.g.
cell proliferation sites 6, 8 and 10. The peptides will be used in, e.g.
The claims detail a method for inducing immune responses against weakly
immunogenic cell-associated peptide antigens (PA) such as those
associated with cancers (i.e. self-proteins), for example, hPSM,
cassociated with cancers (i.e. self-proteins), for example, hPSM,
comprises effecting simultaneous presentation by antigen producing cells
(APCS) of the animals immune system of: (l) at least 1 GTL (cyctoxxic T-
lymphocyte) group derived from the PA and/or at least 1 first T helper
cell group which is foreign to the animal. Analogues of human PSM, human
Herz and human/murine FGRBb comprising a substantial part of all known
at least one foreign the helper periopes of the respective PA and including
at least one foreign the helper epitope (e.g. P2 and/or P30) are also
claimed. The method is used to treat prostate, prostate/breast or breast
cancer when the PA is human PSM, FGRBb and Herz, respectively
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Foreign epitope, P2; prostate specific membrane antigen; vaccination; cytotoxic T-lymphocyte immunity; self-protein; cancer; breast cancer; prostate cancer; cell-associated peptide antigen.
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                    Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Haaning J, Leach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PSMpep012 - P30 inserted in hPSM insertion position 10.
                                                                                                                                                                                                                                                                                                                                                                                                  / Match 100.0%; Score 112; DB 3; Local Similarity 100.0%; Pred. No. 1.2e-11; nss 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; Page 118; 220pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FNNFTVSFWLRVPKVSASHLE 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouritsen S, Nielse
Birk P, Karlsson G;
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98US-0105011P.
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/label= P30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
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                                                                                                                                                                                                                                                                                                                                                                  Sequence 31 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
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us-09-806-703a-14.rag

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AAY92650-55 are peptides designed which correspond to the P2 and P30
cpitopes with 5 flanking human prostate specific membrane antigen (hPSM)
amino acids in each end. The flanking amino acids correspond to the
cpitope insertion sites 6, 8 and 10. The peptides will be used in, e.g. T
cell proliferation assays, but also for ELISA or other in vitro assays.

CC flacials decail a method for inducing immune responses against weakly
immunogenic cell-associated peptide antigens (PA) such as those
associated with cancers (i.e. self-proteins), for example, hPSM,
comprises effecting simultaneous presentation by antigen producing cells
comprises effecting simultaneous presentation by antigen producing cells
(APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-
lymphocyte) group derived from the PA and/or at least 1 first T helper
cell group which is foreign to the animal. Analogues of human PSM, human
Herz and human/murine PGP8b comprising a substantial part of all known
and predicted CTL and B-cell epitopes (e.g. P2 and/or P30) are also
claimed. The method is used to treat prostate, prostate/breast or breast
call amen the PA is human PSM, FGF8b and Herz, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vaccine, LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunogenic luteinising hormone releasing hormone peptide(s) - that suppress LHRH activity in males and females.
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/note= "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                              Length 31;
                                                                                                                                                                                                                                                                                                                                                                          ch 100.0%; Score 112; DB 3; Length 3 1 Similarity 100.0%; Pred. No. 1.2e-11; 21; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "LHRH hapten"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LHRH-containing immunogenic peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR62702 standard; peptide; 32 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 FUNFTVSFWLRVPKVSASHLE 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FNNFTVSFWLRVPKVSASHLE 21
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94US-00229275.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .32
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                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (LADD/) LADD A E. (WANG/) WANG C Y. (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                           Sequence 31 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-APR-1994;
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10-SEP-1995
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Domain
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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid comains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component. The present sequence represents an LHRH.

Containing, invasin-free immunogenic peptide as above which can be used as a potent vaccine for treating e.g. prostatic hyperplasia, androgence dependent carcinoma, prostatic carcinoma, testicular carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, carcinoma, cancer or for induction of infertility. (Updated on 25-WAR-2003 to
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:11.
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 112; DB 2; Length 32; 100.0%; Pred. No. 1.3e-11; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB49075 standard; peptide; 33 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 FUNFTVSFWLRVPKVSASHLE 21
                     Claim 8; Page 84; 213pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2000; 2000WO-US015239
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(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
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Clostridium tetani.
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PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 32 AA;
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27-MAR-2001
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                                                                                                                                                                                                                                                                                                                                                                                                               cancer, c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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                                               The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a vide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alahaimer's disease characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta peptide fibril deposits; tuberculosis) characterised by Antibring derived from serum amyloid A protein (ApoSA); systemic semile amyloid serum amyloid A protein (ApoSA); systemic semile amyloid serum amyloid A protein (ApoSA); systemic semile amyloid serum amyloid A protein (ApoSA); systemic semile amyloid serum amyloid A protein (ApoSA); systemic semile amyloid serum haemodialysis treatment. The present sequence compeptide fused to a universal T-cell epitope which may be used in a composition to treat or prevent Alahaimer's disease. (Updated on 11-SEP-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26. 34
/note= "Gonadotrophin releasing hormone epitope"
34
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 4; Length 33; 100.0%; Pred. No. 1.3e-11; ive 0; Mismatches 0; Indels
useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22. .25
/note= "Spacer peptide"
                           Disclosure; Page 45; 140pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNFTVSFWLRVPKVSASHLE 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU11421 standard; peptide; 34 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic immunogen peptide 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0
Marches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clostridium tetani
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Synthetic.
Chimeric.
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadorropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epicope and immunomimic peptide epicope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometricais, uterine fibroids, benign prostate thypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
/note= "Amidated glycine or glycinamide"
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                                                                                                                                                                                                                                                                                                                                                                     Stevens VC;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 11; Page 7; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                    04-MAY-2001; 2001WO-US014363
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immunogen of the invention
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                                                                                                                                                                                                                                                                                                                                                                     Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                         (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 21; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 34 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200146127-A1
                                                            WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or its analog.
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                                                                                                                        15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                     Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
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The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting cells centration call induction of differentiation of dendritic cells, induction of differentiation of dendritic cells, induction of differentiation of maturation of immunocompetent cell strains originating from hematopoeitic and lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therapeutic activity or targeting). The pseudopeptides are thus useful in human or veterinary medicine as immuniting or are thus useful in human or veterinary medicine as immuniting or covalently bonded to) antigens for vaccination against viral, corovalently bonded to) antigens for vaccination against viral, calls ex vivo, to render the cells immunocompetent before reintroduction in vivo; or used in therapy of certain autoimmune diseases. The pseudopeptides are useful as carriers for antigens or other therapeutic agents due to their ability to form non-covalent bonds via the hydropholic or hydrophilic auxiliary spacer. The present sequence represents a peptide, which has 5 possible conjugation sites for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New amphiphilic acylated pseudopeptides having a functionalized auxiliary spacer, useful as immunomodulators, e.g. as adjuvants in vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pseudopeptide; immunomodulation; adjuvant; antigen presenting cell; macrophage; dendritic cell; cytokine production; immunocompetent cell; autoimmune disease.
                                                       New amphiphilic acylated pseudopeptides having a functionalized a
spacer, useful as immunomodulators, e.g. as adjuvants in vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide which may be conjugated to pseudopeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.4e-11;
                                                                                                           Example 3; Page 61; 166pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16 FINFTVSFWLRVPKVSASHLE 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAG63515 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bauer J, Martin OR,
                  WPI; 2001-502469/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VPI; 2001-496651/54
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 36 AA;
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0; Mismatches

Length 36; Indels

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The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting cells (e.g. macrophages or dendritic cells), induction of differentiation of dendritic cells, induction of cytokine production of differentiation of maturation of immunocompetent cell strains originating from hematopocitic maturation of immunocompetent cell strains originating from hematopocitic or on lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therapeutic activity or trageting). The pseudopeptides correction as immunizing or diagnostic agents. Typically, the pseudopeptides are used as adjuvants together with (or covalently bonded to) antigens for vaccination against viral, parasitic/protozoal, microbial or fungal infections; incubated with blood cells ex vivo, to render the cells immunocompetent before reintroduction in vivo; or used in therapy of certain autoimmune constrains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Preventing or treating disease such as Parkinson's disease characterized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tetanus toxoid amino acids 830-844 and 947-967for fusion protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.4e-11;
                                                                                                                                                                                                                                                                                                                                                                       conjugated to pseudopeptides of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 19; 78pp; English.
                   Example 3.3; Page 88; 267pp; French.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADP02886 standard; peptide; 36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schenk DB, Masliah E;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 36 AA;
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                                                    auxiliary
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or its analog.

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the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (MI) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a linear fusion of the tetanus toxoid peptide corresponding to amino acid 830-844 and 947-967 used in the method of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note= "Gonadotrophin releasing hormone epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 36;
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11. .16
/note= "Spacer peptide"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 112; DB 8; 100.0%; Pred. No. 1.4e-11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16 FINNFTVSFWLRVPKVSASHLE 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAU11425 standard; peptide; 37 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic immunogen peptide 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               label= OTHER
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Synthetic.
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                                                         The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Amyloid beta/tetanus toxoid immunogenic fusion peptide, SEQ ID NO:12.
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                                                                                                                                                                                                                                                                                                                   Length 37;
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                             Claim 11; Page 9; 43pp; English.
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Best Local Similarity
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Clostridium tetani.
                                                                                                                                                                                                                                                                                Sequence 37 AA;
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27-MAR-2001
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component, or an antibody or antibody fragment that binds to an amyloid component, or an antibody or antibody fragment that binds to an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity of at least cour times a base line serum immunoreactivity control level indicates a prognosis of improved status with respect to the disorder. The pharmaceutical compositions of the invention are useful for treating a control beta peptide fabril deposition in a patient. Such disorders include Alzheimer's disease characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by islet amyloid protein peptide (IAPP, amylin) fibrils; reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., amyloidosis and familial amyloid ardiomyopathy characterised by ATTR charits derived from serum amyloid A protein (ApoSSA)); systemic senile control arthritis, characterised by ATTR chirils derived from serum amyloid ardiomyopathy characterised by ATTR chirils derived from transthyretin (TTR); transmissbile spongiform encephalopathies (e.g. Creutzfeld-Jakob disease, Kurul characterised by prion protein deposits; and beta-2-microglobulin deposits which form as result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta peptide fused to a universal T-cell epitope which may be used in a composition to treat or prevont Alzheimer's disease. (Updated on 11-SEP-2003 to standardise OS field)

Sequence 43 AA;

Gaps ö Length 43; Indels 100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.8e-11; tive 0; Mismatches 0; Local Similarity 100. es 21; Conservative Query Match Matches

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23 FNNFTVSFWLRVPKVSASHLE 43

RESULT 56 AAB4617

AAB46177 standard; peptide; 43 AA.

AAB46177;

(first entry) 04-APR-2001

Tetanus toxoid 830-844 + 947-967 epitope AN90542.

Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.

Clostridium tetani.

WO200072880-A2.

07-DEC-2000

26-MAY-2000; 2000WO-US014810.

99US-00322289. 28-MAY-1999;

(NEUR-) NEURALAB LTD.

Yednock T; Vasquez NJ, Bard F, Schenk DB,

WPI; 2001-032104/04.

Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific antibody.

Disclosure; Page 31; 143pp; English

This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the Drain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Fc receptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have noctropic and neuroprotective activity. The method is also useful for monitoring a course of treatment methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease

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Sequence 43 AA;

Gaps ö 43; Indels Length 100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.8e-11; tive 0; Mismatches 0; 21; Conservative Query Match Best Local Similarity Matches 21; Conservat

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ADP02902

Ź ADP02902 standard; peptide; 43

ADP02902;

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(first entry) 12-AUG-2004 Fusion protein #14 for treating neurodegenerative disorder.

antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.

Synthetic.

WO2004041067-A2.

21-MAY-2004.

31-OCT-2003; 2003WO-US034527.

01-NOV-2002; 2002US-0423012P.

(ELAN-) ELAN PHARM INC. (REGC) UNIV CALIFORNIA.

Schenk DB, Masliah E;

WPI; 2004-411388/38.

Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.

Disclosure; SEQ ID NO 35; 78pp; English.

The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-symuclain aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-symuclain and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-symuclain aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-symuclain and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-symuclein or Abeta

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(NEUR-) NEURALAB LTD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the prognosis of a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a selected amyloid component. A patient serum immunoreactivity of at least four times a base line serum immunoreactivity or at least four times a compositions of the invention are useful for treating a pharmaceutical compositions of the invention are useful for treating a wide variety of disorders characterised by amyloid fibril deposition in a patient. Such disorders include Alzheimer's disease characterised by
is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                        Amyloid disease, amyloid fibril deposition, amyloid plaque; immunogenic; antibody, vaccine, Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; cretuzfeld-Jakob disease; Kuru; haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
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                                                                                                                                                                                                                                                                                                                               Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:26.
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                                                                                          100.0%; Score 112; DB 8; Length 43; 100.0%; Pred. No. 1.8e-11;
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                                                                                                                                                                                                                                      AAB49090 standard; protein; 44 AA.
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                                                                                              100.0%; FIL
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Clostridium tetani
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27-MAR-2001
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amyloid beta peptide fibril deposits; type 2 diabetes characterised by islet amyloid protein peptide (IAPP, amylin) fibrils; reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyleitis, tuberculosis) characterised by An fibrils derived from serum amyloid A protein (ApoSSA); systemic senile amyloidosis and familial amyloid cardiomypathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by prion protein deposits, and beta-2-microslobulin deposits which form as result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta poptide fused to a universal T-cell epitope which may be used in a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-2003 to standardise OS field)
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44

FINFTVSFWLRVPKVSASHLE

88888

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AAU11429 standard; peptide; 50
                        24
                                                                                                                                                                                                           AAU11429;
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                                                                                                        61
                                                                                                        RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or
                                                                                                                                                                                Gaps
methods are useful for prophylactic and therapeutic treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
                                                                                                                                                                                í,
                                                                                                                                Length 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fusion protein #29 for treating neurodegenerative disorder.
                                                                                                                                                                             Indels
                                                                                                          Score 112; DB 4; 7
Pred. No. 1.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure, SEQ ID NO 50; 78pp; English
                                                                                                                                                                                                                                                                                                                                                                                                           ADP02917 standard; peptide; 44 AA.
                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                             24 FINFTVSFWLRVPKVSASHLE 44
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                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-2002; 2002US-0423012P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                             21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-411388/38.
                          Alzheimer's disease
                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004041067-A2.
                                                                          Sequence 44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 44 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-MAY-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADP02917;
                                                                                                                          Query Match
Best Local (
                                                                                                                                                                             Matches
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Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antibodies against gonadotropin releasing hormone (GnRH also known as luteinishing hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer),
                                                                                                          Gonadotrophin releasing hormone, GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                'note= "Gonadotrophin releasing hormone epitope (1. .10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Gonadotrophin releasing hormone epitope (2-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                          "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                   aa)
                                                                                                                                                                                                                                                                                                                                                                                                 17. .37
/note= "Tetanus toxoid (947-967
                                                                                                                                                                                                                                                                                                                                                                    .16
te= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                      'nocc-
/note= "Spacer peptide"
                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 11; Page 11; 43pp; English.
                                                                                  Synthetic immunogen peptide 10.
                                                                                                                                                                                                                                                                                                                                           label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-MAY-2001; 2001WO-US014363.
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                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        42. .50
/note= "C
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                                                                                                                                                                                                                                                                                                                                                                                      note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aa)"
50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                  aa)
                                                                                                                                                                                              Clostridium tetani.
                                                                                                                                                                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         or its analog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2001,
                                                        12-MAR-2002
                                                                                                                                                                                                             Mammalia.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimes S,
                                                                                                                                                                                                                                           Chimeric.
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Best Local Similarity 100. Matches 21; Conservative

Query Match

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Gaps

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Indels

100.0%; Score 112; DB 8; 100.0%; Pred. No. 1.8e-11; ive 0; Mismatches 0;

Length 44;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amyloid disease; amyloid fibril deposition; amyloid plaque; immunogenic; antibody; vaccine; Alzheimer's disease; type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy; transmissible spongiform encephalopathy; Creutzfeld-Jakob disease; Kuru, haemodialysis-asssociated beta-2-microglobulin deposition; amyloid beta peptide; universal T-cell epitope; neuroprotective.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amyloid beta/tetanus toxoid immunogenic fusion protein, SEQ ID NO:27.
                                                                                                                                                                               Gaps
                                                                                                                                                                                 ;
0
                                                                                                                                      100.0%; Score 112; DB 5; Length 50; 100.0%; Pred. No. 2.1e-11; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 46; 140pp; English.
                                                                                                                                                                                                                                          17 FNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                        AAB49091 standard; protein; 51 AA.
                                                                                                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-0137010P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2000; 2000WO-US015239
                                                           immunogen of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
(first entry)
                                                                                                                                                                           21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-070921/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
Clostridium tetani.
                                                                                                                                                        Similarity
                                                                                                 Sequence 50 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-1999;
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27-MAR-2001
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                                                                                                                                      Query Match
Best Local S
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                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                   RESULT 62
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    8X33333
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (For receptor mediated phagorytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta, or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have mostropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The
                                                                                                                                         encephalopathies (e.g. Creutzfeld-Jakob disease, Kuru) characterised by prion protein deposits and beta-2-microglobulin deposits which form as result of long term haemodialysis treatment. The present sequence represents an immunogenic fusion protein comprising an amyloid beta peptide fused to a universal T-cell epitope which may be used in a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
amyloid beta peptide fibril deposits; type 2 diabetes characterised by islet amyloid protein peptide (IAMP, amylin) fibrils; reactive systemic amyloidosis associated with systemic inflammatory diseases (e.g., rheumatoid arthritis, osteomyelitis, tuberculosis) characterised by AA fibrils defived from serum amyloid A protein (ApoSSA); systemic senile amyloidosis and familial amyloid cardiomyopathy characterised by ATTR fibrils derived from transthyretin (TTR); transmissible spongiform
                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                           ó
                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 4; Length 51; 100.0%; Pred. No. 2.1e-11;
                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tetanus toxoid epitope fusion construct #15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yednock T;
                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                        24 FNNFTVSFWLRVPKVSASHLE 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB46195 standard; peptide; 51 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vasquez NJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-MAY-2000; 2000WO-US014810.
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                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                           Sequence 51 AA;
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                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                         Matches
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44

24 FNNFTVSFWLRVPKVSASHLE

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AAG63661 standard; peptide; 59

RESULT 65

AAG6366:

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                         Gaps
methods are useful for prophylactic and therapeutic treatment of Alzheimer's disease
                                                                                                                                                                                                                                                                                                                                                                                                                   antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.
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0
                                                                                       Length 51;
                                                                                                                                                                                                                                                                                                                                                                                    Fusion protein #30 for treating neurodegenerative disorder.
                                                                                                                       Indels
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                                                                            ch 100.0%; Score 112; DB 4;
1. Similarity 100.0%; Pred. No. 2.1e-11;
21; Conservative 0; Mismatchee α
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                                                                                                                                                        7
                                                                                                                                                                          24 FNNFTVSFWLRVPKVSASHLE 44
                                                                                                                                                                                                                                                                              ADP02918 standard; peptide; 51 AA.
                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                 12-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Masliah E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-411388/38.
                                                                                   Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004041067-A2.
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                                                  Sequence 51 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schenk DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
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ID ADPC
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New amphiphilic acylated pseudopeptides having a functionalized auxiliary spacer, useful as immunomodulators, e.g. as adjuvants in vaccines.

Rodriguez S;

Martin OR,

Bauer J,

(OMPH-) OM-PHARMA.

WPI; 2001-502469/55.

99WO-IB002038. 99WO-IB002038

22-DEC-1999; 22-DEC-1999;

28-JUN-2001

WO200146127-A1

Synthetic.

Pseudopeptide; immunomodulation; adjuvant; antigen presenting cell; macrophage; dendritic cell; vaccine; autoimmune disease.

Peptide comprising 4 conjugation sites for a pseudopeptide.

29-OCT-2001

AAG63661;

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The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting cells of e.g. macrophages or dendritic cells), induction of differentiation of dendritic cells, induction of cytokine production and induction of dendritic cells, induction of cytokine production and induction of macuration of macuration of immunocompetent cell strains originating from hematopoeitic and lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therapeutic activity or trageting). The pseudopeptides are thus useful in human or veterinary medicine as immunizing or are thus useful in human or veterinary medicine as immunizing or covalently bonded to) antigens for vaccination against viral, or used in therapy of certain autoimmune diseases. The perasitic/protozoal, microbial or fungal infections; incubated with blood cells ex vivo, to render the cells immunocompetent before reintroduction in vivo; or used in therapy of certain autoimmune diseases. The sendopeptides are useful as carriers for antigens or other therapeutic agents due to their ability to form non-covalent bonds via the hydrophobic or hydrophilic auxiliary spacer. The present sequence represents a peptide, which has 4 possible conjugation sites for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 112; DB 4;
Pred. No. 2.5e-11;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 3; Page 59; 166pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Sc
100.0%; Pr
tive 0;
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 59 AA;
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RESULT 66 AAG63513

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Gaps

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Indels

Length 51;

100.0%; Score 112; DB 8; 100.0%; Pred. No. 2.1e-11; ive 0; Mismatches 0;

Query Match
Best Local Similarity 100.
Matches 21; Conservative

4

1 FNNFTVSFWLRVPKVSASHLE 21

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/note= "epsilon amino substituted by Lys in which each of
the alpha and epsilon amino groups is substituted by Lys,
both of the latter two Lys residues being substituted in
each of their alpha and epsilon amino groups by
(NANP) © QYIKANSKFIGITEFNNFTVSFWLRVPKVSASHLE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residues of alpha and epsilon amide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the epsilon amino groups are substituted with polypeptides consisting of one or more plasmodial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QYIKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14261-2, AAR14264-5 and AAR15316
                                                                                                                                                                                                                                                                                                 /note= "epsilon amino substituted by Lys in which both alpha and epsilon amino groups are substituted with the sequence (NANP) 6QYIKANSKFIGITEFNNFTVSFWLRVPKVSASHLE"
                                                                                                                                                                                                                                     /note= "epsilon amino substituted with the (NANP) 6QYIKANSKFIGITEFNNFTVSFWLRVPKVSASHLE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 2; Length 63; 100.0%; Pred. No. 2.7e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
       Immunogen; Plasmodium; malaria; lysine; immunoassay.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
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                                                                                                 Location/Qualifiers
                                                                                                                         25. .38
/label= T epitope
                                                                                                                                                                                          'label= T epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 10; Page 15; 22pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91EP-00200727.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1991-297504/41.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 63 AA;
                                                                                                                                                                                                               Modified-site
                                                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                                                                                                                        Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-MAR-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-APR-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-OCT-1991.
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                                                  Synthetic
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                                                                                                                         Region
                                                                                                                                                                       Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 68
                                                                                                    Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR14261
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting cells and adjuvant action, based on activation of antigen presenting cells and adjuvant action, based on activation of antigen presenting cells and induction of differentiation of maturation of immunocompetent cells from the preduction and induction of maturation of immunocompetent cells strains originating from hematopoeitic and lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therappeutic activity or targeting). The pseudopeptides are thus useful in human or veterinary medicine as immunizing or diagnostic agents. Typically, the pseudopeptides are used as adjuvants or cogether with (or covalently bonded to) antigens for vaccination against viral, parasitic/protozoal, microbial or fungal infections; incubated with blood cells avivo, to render the cells immunocompetent before
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    auxiliary
                                                                                                                                                                                Pseudopeptide; immunomodulation; adjuvant; antigen presenting cell; macrophage; dendritic cell; cytokine production; immunocompetent cell; autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New amphiphilic acylated pseudopeptides having a functionalized au spacer, useful as immunomodulators, e.g. as adjuvants in vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diseases. The present sequence represents a peptide which may be conjugated to pseudopeptides of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 112; DB 4; Length 59; Best Local Similarity 100.0%; Pred. No. 2.5e-11; Matches 21; Conservative 0; Mismatches 0; Indels
                                                                                                                                     A peptide which may be conjugated to pseudopeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 3.2; Page 87; 267pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rodriguez S;
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AAG63513 standard; peptide; 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                 21-DEC-2000; 2000WO-FR003650.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-IB002038
                                                                                        (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Martin OR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-496651/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (OMPH-) OM-PHARMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 59 AA;
                                                                                                                                                                                                                                                                                                                      WO200146126-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-DEC-1999;
                                                                                          15-0CT-2001
                                                                                                                                                                                                                                                                                                                                                                      28-JUN-2001
                                                                                                                                                                                                                                                                             Synthetic.
                                             AAG63513;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 67
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the invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin branched comprising a ghrelin (or sub-sequence thereof) or a ghrelin analogue comprising a ghrelin becall epitope and non-ghrelin chemical moieties to the immune compositions comprising the production of antibodies against the animal's autologous ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a phrelin analogue of the invention; a nucleic acid analogue of the invention; a nucleic acid analogue of the invention; a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or ameliorating obesity or other conditions contracterised by excess body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly contracting the method may also be used for upregulating ghrelin for the contraction or amelioration of anorexia or cachexia. The method of may also be used for upregulating ghrelin for the contraction or amelioration of anorexia or cachexia. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       may also be used for treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating ghrelin and ghrelin-receptor related cancers. The present sequence represents a ghrelin analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              comprising mature rat ghrelin with added epitopes used in an example of
         ghrelin; ghrelin analogue; immunogen; immunisation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing antibodies against ghrelin.
                                                              cytostatic; metabolic;
Ghrelin; autologous ghrelin; ghrelin analogue; Lummurogum; anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic immunomodulator; vulnerary; vaccine; rat; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 112; DB 8;
Pred, No. 2.8e-11;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; SEQ ID NO 15; 83pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
100.0%;
                                                                                                                                                                                                                                               12-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                                                                                                                                   12-SEP-2002; 2002DK-00001345.
                                                                                                                                                                                                                                                                                                  12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21; Conservative
                                                                                                                                                                                                                                                                                                                                                                          Boving TEG, Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                      (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                        WO2004024183-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 64 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-JAN-1992
                                                                                                                                                                                                            25-MAR-2004
                                                                                                                   Rattus sp.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR14265;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The peptide is a specific example of highly generic immunogenic substituted lyaines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residues of alpha and epsilon anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups and/or (n+1)/2 of the epsilon amino groups are substituted with polypeptides consisting of one or more groups are substituted with polypeptides consisting of one or more amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QTIRANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14262 - AAR14265 and AAR15436
                                                                                                                                                                                                                                                                            /note= "epsilon-amino group substituted with Lys in which both alpha and epsilon amino groups are substituted with the sequence FNNFTVSFWLRVPKVSASHLE(NANP)10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                         /note= "epsilon-amino substituted with the sequence FNNFTVSFWLRVPKVSASHLE(NANP)10 "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mature rat ghrelin with added epitopes (peptide 3), SEQ ID NO:15.
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                                         Immunogenic branched polypeptides for antimalarial vaccines.
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                                                                             Immunogen; Plasmodium; malaria; lysine; immunoassay.
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                                                                                                                                                   Location/Qualifiers
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/label= T epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 15; 22pp; English
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       (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bianchi E,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 64 AA;
                                                                                                                                                                                                        Modified-site
                                                                                                                                                                                                                                                           Modified-site
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     14-JAN-1992
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                                                                                                               Synthetic
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Gaps

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The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residues of alpha and epsilon anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups are substituted with polypeptides consisting of one or more palsamodial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QYIKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14261 - AAR14264, AAR14266 and AAR15436
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                                                                                                                                                                                               /note= "epsilon amino substituted with Lys in which alpha and epsilon amino groups are each substituted with the sequence FNNFTVSFWLRVPKVSASHLE(NANP)10K"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                   /note= "epsilon amino substituted with the sequence FNNFTVSFWLRVPFVSASHLE(NANP)10K "
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 Immunogenic branched polypeptides for antimalarial vaccines.
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                            Immunogen; Plasmodium; malaria; lysine; immunoassay
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Pred. No. 2.8e-11;
; Mismatches 0;
                                                                                          Location/Qualifiers
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'label= T epitope
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100.0%; Pr
tive 0;
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                                                                                                                                                                                                                                                                                                                      91EP-00200727
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                                                                                                                                   Modified-site
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                                                            Synthetic.
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                                                                                                        Region
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                                                                                                                                                                                                                       /note= "epsilon amino substituted by Lys in which both the alpha and epsilon amino groups are substituted with further Lys residues, the latter two Lys residues each being substituted on the alpha amino by FNNFTVSFWLRVPXVSASHL- E(NANP)10 and on the epsilon amino by the sequence VQGEESNDK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of 1-19sine amino acid reshdues of alpha and egslibn anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epslibn amino groups and/or (n+1)/2 of the epslibn amino groups and/or (n+1)/2 of the epslibn amino groups are substituted with polypeptides consisting of one or more paramona cid sequence corresponding to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QYTKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-Plasmodium antibodies in blood, serum and blood spot samples. Determination can be effected by ELISA. See also AAR14262 - AAR14265 and AAR15436
                                                                                                                                             /note= "epsilon amino substituted by Lys in which the alpha amino is substituted with the sequence FNNTTWSFWIXSASHIE(NANP) 10 and the epsilon amino is substituted with the sequence VQGEESNDK"
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                                                                                   /note= "epsilon amino substituted by the sequence
VQGEESNDK"
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                                  Location/Qualifiers
                                                              label= T epitope
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Best Local Similarity 100.
Matches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ENIE ) ENIRICERCHE SPA.
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                                                                               Modified-site
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 Synthetic.
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                                  Key
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us-09-806-703a-14.rag

17-JUN-2004 (first entry)

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The invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting ghrelin (or sub-sequence thereof) or a ghrelin manleque comprising a ghrelin are leguence thereof) or a ghrelin moieties to the immune system, thereby inducing the production of antibodies against the animal saucologous ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; wetcors and host cells comprising this nucleic acid; a method of identifying a modified ghrelin polypeptide capable of inducing antibodies against unmodified autologous ghrelin; and use of immunogenic compositions of the invention. The method of the invention is useful for treating, preventing or amelioration obseity or other conditions characterised by excess body fat deposits by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for upregulating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating sphrelin and ghrelin analogue comprises. The present sequence represents a ghrelin analogue
                                          Ghrelin; autologous ghrelin; ghrelin analogue; immunogen; immunisation; anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant therapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or aning of animal's immune system, for producing antibodies against ghrelin.
Mature ghrelin with added epitopes (peptide 5), SEQ ID NO:17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; SEQ ID NO 17; 83pp; English.
                                                                                                                                                                                                                                                                                                                                        12-SEP-2003; 2003WO-DK000592.
                                                                                                                                                                                                                                                                                                                                                                                  12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Boving TEG, Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-329403/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                 WO2004024183-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 68 AA;
                                                                                                                                                                             Synthetic.
Unidentified.
                                                                                                                                                                                                                                                                                              25-MAR-2004.
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Immunizing against autologous ghrelin in animals e.g. human beings, useful for treating obesity, by presenting ghrelin polypeptide, its subsequence or analog, to animal's immune system, for producing

Example 1; SEQ ID NO 16; 83pp; English.

antibodies against ghrelin.

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                                        ö
100.0%; Score 112; DB 8; Length 68; larity 100.0%; Pred. No. 3e-11; Conservative 0; Mismatches 0; Indels
                                                                      FUNFTVSFWLRVPKVSASHLE 21
                 Local Similarity
les 21; Conserv
     Query Match
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Matches
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Sequence 68 AA;

FINETVS FWLR VPKVSASHLE 46

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ADM06903 standard; peptide; 68 AA. ADM06903; ADM06903

RESULT 73

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ghrelin analogue; immunogen; immunisation;
                                   anti-ghrelin antibody; obesity; anorexia; cachexia; wound; burn; adjuvant rherapy; in vitro fertilisation; ghrelin-related cancer; ghrelin receptor-related cancer; anorectic; cytostatic; metabolic; immunomodulator; vulnerary; vaccine; epitope.
              Mature ghrelin with added epitopes (peptide 4), SEQ ID NO:16.
                                                                                                                                         12-SEP-2002; 2002DK-00001345.
12-SEP-2002; 2002US-0410164P.
                             ghrelin;
                                                                                                                            12-SEP-2003; 2003WO-DK000592
                                                                                                                                                                               s;
                                                                                                                                                                                             WPI; 2004-329403/30.
                            Ghrelin; autologous
                                                                                                                                                                (PHAR-) PHARMEXA AS
                                                                                              WO2004024183-A1.
                                                                               Unidentified.
                                                                                                             25-MAR-2004
                                                                                                                                                                               Boving TEG,
                                                                       Synthetic
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the invention relates to a method for immunising animals (including humans) against autologous ghrelin. The method involves presenting the ghrelin (or sub-sequence thereof) or a ghrelin analogue comprising a ghrelin for sub-sequence thereof) or a ghrelin analogue comprising a ghrelin belongs to the immune system, thereby inducing the production of antibodies against the animal's autologous ghrelin. The invention also relates to immunogenic compositions comprising ghrelin, a ghrelin sub-sequence or a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention; a nucleic acid encoding a ghrelin analogue of the invention. The method of the invention is useful for treating, preventing or ameliorating obesity or other conditions treating, preventing or ameliorating obesity by downregulating ghrelin to such an extent that the total amount of body fat is significantly decreased. The method may also be used for upregulating ghrelin for the treatment, prevention or amelioration of anorexia or cachexia. The method may also be used for treating wound or burns, in adjuvant therapy for in vitro fertilisation, and for treating ghrelin and ghrelin-receptor related cancers. The present sequence represents a prelin analogue comprising mature ghrelin with added epitopes used in an example of the

Gaps . 0 Length 68; Indels Score 112; DB 8; Pred. No. 3e-11; ; Mismatches 0; 21 23 ö FINITIONS FWLR VPKVSASHLE 1 FNNFTVSFWLRVPKVSASHLE 100.08; 100.08; 21; Conservative Query Match Best Local Similarity Matches 21; Conserv RESULT 74 g

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AAB46190 standard; peptide; 72 AA AAB46190

AAB46190;

us-09-806-703a-14.rag

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The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response against alpha-synuclein and/or Abeta to a patient, and the administration improves motor characteristics of the patient. Alpha-synuclein or Abeta is useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                       Preventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; SEQ ID NO 30; 78pp; English.
                                                                                            31-OCT-2003; 2003WO-US034527.
                                                                                                                                           01-NOV-2002; 2002US-0423012P
                                                                                                                                                                                        (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                Schenk DB, Masliah E;
                                                                                                                                                                                                                                                                                                           WPI; 2004-411388/38.
  WO2004041067-A2
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                                                 21-MAY-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention describes a novel method of preventing or treating a disease associated with amyloid deposits of amyloid precursor protein (APP) Abeta fragments in the brain of a patient, which comprises administering to the patient: (a) an antibody that binds to Abeta, the antibody binds to an amyloid deposit and induces a clearing response (Foreeptor mediated phagocytosis) against it (b) a polypeptide containing an N-terminal segment of at least residues 1-5 of Abeta; or (c) an agent that induces an immunogenic response against residues 1-3 to 7-11 of Abeta. The products of the invention have nootropic and neuroprotective activity. The method is also useful for monitoring a course of treatment being administered to a patient e.g. active and passive immunization. The methods are useful for prophylactic and therapeutic treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                            Amyloid deposit; APP; Abeta; brain; human; clearing response; nootropic; Fc receptor mediated phagocytosis; immunogenic response; neuroprotective; amyloid precursor protein; Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Preventing or treating a disease associated with amyloid deposits, especially Alzheimer's disease, comprises administering amyloid specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 4;
100.0%; Pred. No. 3.2e-11;
iive 0; Mismatches 0;
                                                                                    Tetanus toxoid epitope fusion construct #10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yednock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 32; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FINETVSFWLRVPKVSASHLE 72
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vasquez NJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADP02897 standard; peptide; 74
                                                                                                                                                                                                                                                                                                                                                                    26-MAY-2000; 2000WO-US014810.
                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NEUR-) NEURALAB LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-032104/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bard F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              disease
                                                                                                                                                                                                                           Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 72 AA;
                                                                                                                                                                                                                                                                          WO200072880-A2.
                                     04-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                   28-MAY-1999;
                                                                                                                                                                                                                                                                                                                       07-DEC-2000
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antibody

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                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "epsilon amino substituted with Lys in which alpha and epsilon amino groups are each substituted with the sequence (NANP)3FNNFTVSFWLRVDFVSASHLE(NANP)10K"
                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                /note= "epsilon amino substituted with the sequence (NANP) 3FNNFTVSFWLRVPKVSASHLE (NANP) 10K"
                                   .
0
                                                                                                                                                                                                                                           Immunogenic branched polypeptides for antimalarial vaccines.
     Length 74;
100.0%; Score 112; DB 8; Length 7
100.0%; Pred. No. 3.3e-11;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                     Immunogen; Plasmodium; malaria; lysine; immunoassay.
                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                         AAR14264 standard; peptide; 77 AA.
                                                          1 FNNFTVSFWLRVPKVSASHLE 21
                                                                          FNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                    /label= T epitope
                                                                                                                                                                                                              (first entry)
                              21; Conservative
                 Similarity
                                                                                                                                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                           Modified-site
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EP450715-A.

antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid; Parkinson's disease.

Synthetic.

Fusion protein #9 for treating neurodegenerative disorder.

ADP02897;

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Query Match Matches

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Synthetic.
                                                                                                                                                                                                                                                                                                                                                                   ADP02896;
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Best Local 8
                                                                                                                                                                                                                                                          Matches
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                                                                                                                                                                                  The peptide is a specific example of highly generic immunogenic substituted lysines or polylysines having a number n (where n is 1-15) of L-lysine amino acid residues of alpha and epsilon anide linkage, where (n+1)/2 of the alpha amino groups and/or (n+1)/2 of the epsilon amino groups are substituted with polypeptides consisting of one or more plasmodial B epitopes covalently bound to one or more peptides with an amino acid sequence corresponding to that of a T epitope such as FNNFTVSFWLRVPKVSASHLEA or QTIKANSKFIGITE. The branched polypeptides can be used as immunogens for preparing genetically non-restricted antimalaria vaccines and for determining anti-plasmodium antibodies in blood, serum and blood-spot samples. Determination can be effected by ELISA. See also AAR14261 - AAR14263, AAR14265 and AAR15436
                                                                                                                           New immunogenic branched polypeptide derivs. - used as antigens in enzyme immunoassays and as anti sporozoite vaccines against Plasmodium
                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antiparkinsonian; antibody therapy; Lewy body; alpha-synuclein; aggregation; brain; immunogenic response; beta-amyloid;
                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                     Length 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fusion protein #27 for treating neurodegenerative disorder.
                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 2;
100.0%; Pred. No. 3.4e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                      FINFTVSFWLRVPKVSASHLE 33
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                                                                                                                                                                Claim 11; Page 16; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                          1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                             ADP02915 standard; peptide; 79
                            91EP-00200727
                                               90IT-00019914.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-2002; 2002US-0423012P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-OCT-2003; 2003WO-US034527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-AUG-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                       21; Conservative
                                                                 (ENIE ) ENIRICERCHE SPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ELAN-) ELAN PHARM INC. (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Masliah E;
                                                                                    Bianchi E,
                                                                                                        WPI; 1991-297504/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Parkinson's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-411388/38.
                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004041067-A2.
                                                                                                                                                                                                                                                                                                                  Sequence 77 AA;
                            28-MAR-1991;
                                               02-APR-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-MAY-2004.
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                                                                                                                                               falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
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                                                                                      Pessi A,
                                                                                                                                                                                                                                                                                                                                    Query Match
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Matches
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reventing or treating disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in brain by administering agent that induces immunogenic response against alpha-synuclein and/or beta-amyloid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a method of preventing (M1) or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapa
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 8; 100.0%; Pred. No. 3.5e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
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                                                                                                                                                                                                          Disclosure; SEQ ID NO 48; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADP02896 standard; peptide; 101 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52 FNNFTVSFWLRVPKVSASHLE 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 79 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-AUG-2004
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the brain, by administering an agent that induces an immunogenic response against alpha-synuclein and/or beta-amyloid (Abeta) to a patient. (M1) is useful for preventing or treating a disease such as Parkinson's disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, which involves administering agent that induces immunogenic response improves motor characteristics of the patient, and the administration in useful in the manufacture of a preparation for simultaneous, separate or sequential treatment of disease characterized by Lewy bodies or alphasynuclein aggregation. This sequence corresponds to a fusion peptide used in the method of the invention.

Sequence 101 AA;

; 100.0%; Score 112; DB 8; Length 101; 100.0%; Pred. No. 4.7e-11; ive 0; Mismatches 0; Indels (1 FNNFTVSFWLRVPKVSASHLE 21 Local Similarity 100. Query Match Best Loca Matches ò 셤

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Gaps

FINETVSFWLRVPKVSASHLE 65 45

RESULT 79 **AAB20149**

AAB20149 standard; protein; 109 AA. 30-APR-2001 (first entry) AAB20149;

Growth differentiation factor 8 AutoVac construct GDF-8 P30-2.

T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein. Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin;

Homo sapiens. Clostridium tetani.

Synthetic. Chimeric.

"identical to residues 267-314 of human GDF-8" Location/Qualifiers 1. .48 /note= Key Region

70. .109 /note= "identical to residues 336-375 of human GDF-8" "tetanus toxoid P2 epitope" 69. 'note= Region Region

/note= "Cys-73 may be substituted by Ser to avoid disulfide bond formation" Misc-difference

/note= "optionally replaced by Glu-Gly" .91 Misc-difference

WO200105820-A2

25-JAN-2001

20-JUL-2000; 2000WO-DK000413.

99DK-00001014. 20-JUL-1999; 26-JUL-1999;

(MEBI-) M & E BIOTECH AS

Klysner S; s, Mouritsen Halkier T,

VPI; 2001-112680/12.

Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.

Example 1; Page 101-102; 110pp; English.

The present sequence is that of AutoVac construct GDF-8 P30-2, comprising the 109 C-terminal amino acid residues of human growth differentiation actor (GDF-8) in which residues 49-69 are replaced by the promiscuous tetams toxin T-cell epitope P30 (see AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, be used to treat human diseases such as cancer cachexia where muscle arrother all parts and producting free acceptance of the production that the GDF-8 was accounted and contents suffering from acute and chronic arrother and chronic arrother animals. heart failure

Sequence 109 AA;

Gaps ; 0 Length 109; Indels . Score 112; DB 4; Pred. No. 5.1e-11; ; Mismatches 0; ; 0 100.0%; Best Local Similarity 100. Matches 21; Conservative Query Match

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80 RESULT 80

AAB20151 standard; protein; 109 AA

AAB20151;

(first entry) 30-APR-2001

Growth differentiation factor 8 AutoVac construct GDF-8 P30-3B.

Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.

sapiens Ношо

Clostridium tetani.

Synthetic. Chimeric.

 .83 /note= "identical to residues 267-349 of human GDF-8" Location/Qualifiers Region

may be substituted by Ser to avoid /note= "tetanus toxoid P2 epitope" /note= "Cys-73 may be sut disulfide bond formation" 84. .104 Misc-difference 73 Region A CONTRACTOR OF STATEMENT OF ST

Misc-difference 90. . 91 /note= "optionally replaced by Glu-Gly" Region

WO200105820-A2

25-JAN-2001

20-JUL-2000; 2000WO-DK000413.

99DK-00001014. 20-JUL-1999; 26-JUL-1999;

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/note= "identical to residues 366-375 of human GDF-8"
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                                                                              20-JUL-2000; 2000WO-DK000413.
                                                                                                       99DK-00001014
                                                                                                                    99US-0145275P
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                                                                                                                                                                      Halkier T, Mouritsen S,
                                                                                                                                             (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                               WPI; 2001-112680/12.
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Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 109 AA;
                             WO200105820-A2.
                                                                                                      20-JUL-1999;
                                                                                                                    26-JUL-1999;
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                                                     25-JAN-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is that of AutoVac construct GDF-8 F30-3B, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 84.104 are replaced by the promiscuous tetanus toxin T-cell epitope F30 (see AAB2014). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the Cterminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as F30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Whuleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                      Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .. .78
'note= "identical to residues 267-345 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Cys-73 may be substituted by Ser to avoid disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth differentiation factor 8 AutoVac construct GDF-8 P30-3A.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90...91
/note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 112; DB 4;
100.0%; Pred. No. 5.1e-11;
ive 0; Mismatches 0;
                                       Mouritsen S, Klysner S;
                                                                                                                                         Example 1; Page 104; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB20150 standard; protein; 109 AA.
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             (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79. .99
                                                              WPI; 2001-112680/12
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Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference
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                                     Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB20150;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
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Region
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The present sequence is that of AutoVac construct GDF-8 P30-3A, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 9-99 are replaced by differentiation factor 1 -cell epitope P30 (see AAB20144). It is an comprision to the promiscuous tetanus toxin T-cell epitope P30 (see AAB20144). It is an comparable of the invention to produce a recombinant therapeutic vaccine that can scapable of effecting down-regulation of GDF-8 in order to increase the capable of breaking autotolerance against autologous GDF-8. They comprise capable of breaking autotolerance against autologous GDF-8. They comprise capable of breaking autotolerance against autologous GDF-8. They comprise capable of breaking autotolerance against autologous GDF-8. They comprise capable of the authentic 3-dimensional structure of the native sequence is replaced by a T-cell epitope such as P30, with minimal discussion of the authentic 3-dimensional structure of the protein.

Whuleic acids encoding the GDP-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDP8 vaccines can be used for treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients cancer cachexia where muscle atrophy is pronounced and for patients
                                                                                                                                                                                                                      Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; Page 102-103; 110pp; English
Klysner S;
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The present sequence is that of AutoVac construct GDF-8 P30-1, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 2-41 are replaced by the promiscuous tetanus toxin T-cell epitope P30 (see AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can atrophy is pronounced and for patients suffering from acute and chronic heart failure
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
.. .20
'note= "identical to residues 267-286 of human GDF-8"
                                                                                of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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0
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                                                                                                         /note= "Cys-73 may be substituted by Ser disulfide bond formation"
                                                                                                                                           90. .91
/note= "optionally replaced by Glu-Gly"
                                                                               'note= "identical to residues 307-375
                              21. .41
/note= "tetanus toxoid P2 epitope"
42. .109
                                                                                                                                                                                                                                                                                                                                                                       Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 99; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADL63984 standard; protein; 121 AA.
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                                                                                                                                                                                                                                                       20-JUL-2000; 2000WO-DK000413
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Best Local Similarity 100.v..
                                                                                                                                                                                                                                                                                                                                                                      Mouritsen S,
                                                                                                                                                                                                                                                                                                                                      (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-112680/12.
                                                                                              Misc-difference
                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 109 AA;
                                                                                                                                                                                         WO200105820-A2
                                                                                                                                                                                                                                                                                       20-JUL-1999;
26-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                      Halkier T,
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 Region
                               Region
                                                              Region
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Chimeric human IL-13 protein with tetanus toxin p30 peptide SegID 11.

(first entry)

03-JUN-2004

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This invention relates to a novel immunogenic composition comprising an response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate chuman vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthemacia activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 protein containing a tetanus p30 peptide (immunogen 2) of the invention.
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0
human; immunogenic; IL-13; interleukin-13; vaccine;
airway hyper-responaiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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Pred. No. 5.7e-11;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                74. .94
/note= "Tetanus P30 peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 11; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
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1 Similarity 100.0%;
21; Conservative 0;
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ellis JH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-239121/22.
                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
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Best Local Similarity
Matches 21; Conserv
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                                                                                                                                                                                                                                                                                                  Chimeric.
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                                                                                                                                                                                                                                                                                                                                                                                                Peptide
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ADL63908
ID ADL63:
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AC ADL63:
NAMES OF COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COLOR COL
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Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermaticis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; human; T-helper epitope; tetanus toxin; P30; mutent; mutein

74. .94 /note= "Tetanus toxin P30 epitope"

WO2004019979-A2

Region

11-MAR-2004.

Location/Qualifiers

Homo sapiens. Clostridium tetani. Chimeric.

Human IL-13/tetanus toxin P30 epitope immunogen 2, SEQ ID NO:11.

(first entry)

03-JUN-2004

ADL97891;

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human; immunogenic; IL-13; interleukin-13; vaccine;
airvay hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30.
                   Chimeric human IL-13 protein with tetanus toxin p30 peptide SegID 11.
                                                                                                                                                                                                                                                                                                                                                                      New vaccine composition useful for treating asthma, Chronic obstructipulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                        74. .94
/note= "Tetanus P30 peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 11; 89pp; English
                                                                                                                                                        Location/Qualifiers
74. .94
                                                                                                                                                                                                                                                                      30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                  28-AUG-2003; 2003WO-GB003729
(first entry)
                                                                                                                                                                                                                                                                                                       (GLAX ) GLAXO GROUP LID
                                                                                                                                                                                                                                                                                                                           Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-239122/22.
                                                                                                                    omo sapiens.
lostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 121 AA;
                                                                                                                                                                                                       WO2004019975-A2
03-JUN-2004
                                                                                                                                                                                                                            11-MAR-2004.
                                                                                                                                       Chimeric.
                                                                                                                                                                        Peptide
                                                                                                                    Ношо
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Vaccine composition useful for treating asthma, Chronic Obstructive

30-AUG-2002; 2002GB-00020211. 28-FEB-2003; 2003GB-00004672. 28-AUG-2003; 2003WO-GB003721

(GLAX) GLAXO GROUP LTD.

Ashman C;

Ellis JH,

WPI; 2004-239126/22.

Chronic obstructive

Pulmonary Disease or atopic disorders, e.g. dermatitis, comprie immunogen generating an immune response against interleukin-13.

Disclosure; SEQ ID NO 11; 45pp; English.

comprises

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Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB45524 standard; protein; 122 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FINFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FINETVSFWLRVPKVSASHLE 94
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB45524
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 equences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, gobbe cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive squence is the chimeric human II-13 protein containing a tetanus p30 peptide (immunogen 2) of the invention.
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Pred. No. 5.7e-11;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21
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ADL97891 standard; protein; 121 AA.

RESULT 85 ADL97891 ID ADL9

21, Conservative

ч 74

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Query Match Best Local Similarity Matches 21; Conserv

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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immune response against self interleukin-13 (IL-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonucleotide containing at least one unmethylated CG motif and a saponin. The IL-13 minunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis.
                                                                                                                                                                                                                                                                                                                       or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a human IL-13/tetanus toxin P30 epitope immunogen of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 8; 100.0%; Pred. No. 5.7e-11;
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airway hyper-responsiveness, ARR; mucus hyper-secretion, goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30.
                                                                                                                                                             Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                        The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleakin-5 (L-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live accines. In addition, it is possible that they may be used in the treatment of cancer and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 112; DB 3;
Pred. No. 5.8e-11;
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/note= "Tetanus P30 peptide"
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                                                                                                                                                                                                                                      Example 7; Page 134; 172pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30 FINFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
                 99US-0132811P.
99DK-00000552
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28-FEB-2003; 2003GB-00004672.
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                                                       BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GLAX ) GLAXO GROUP LTD.
(ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                                                                                                                                                       helminthic infections
                                                                                                                              WPI; 2000-672791/65.
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Clostridium tetani.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 122 AA;
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                                                     (MEBI-) M & E
                 06-MAY-1999;
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                                                                                            Klysner
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Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                               IL-5; interleukin-5; allergy; cytokine; helminthic infection;
eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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100.0%; Pred. No. 5.8e-11;
ive 0; Mismatches 0;
           Modified murine interleukin-5 SEQ ID NO: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified murine interleukin-5 SEQ ID NO: 19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 7; Page 156; 172pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB45507 standard; protein; 122 AA.
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                                                                                                                                                                                                                                                                      99DK-00000552,
99US-0132811P.
                                                                                                                                                                                                                                    19-APR-2000; 2000WO-DK000205
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21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                            (MEBI-) M & E BIOTECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nelminthic infections
                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-672791/65.
                                                                                                                        Clostridium tetani.
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Matches 21; Conserv
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                                                                                                                                                         WO200065058-A1.
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                                               Asthma; IL-5;
                                                                                                       Mus musculus.
                                                                                                                                                                                                                                                                      23-APR-1999;
                                                                                                                                                                                                                                                                                          06-MAY-1999;
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                                                                                                                                                                                               02-NOV-2000
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Gaps

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Length 122; Indels

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(GLAX ) GLAXO GROUP LTD.
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                             Ellis JH,
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                                                                                                                           This invention relates to a novel immunogenic composition comprising an In-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chiman vaccine. The present invention describes human chimaric IL-13 and a having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human II-13 protein containing a tetanus p30 peptide (immunogen 4) of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                        New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 112; DB 8;
100.0%; Pred. No. 5.8e-11;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Tetanus P30 peptide"
                                                                                                   Disclosure; SEQ ID NO 13; 89pp; English.
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
              WPI; 2004-239121/22.
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Clostridium tetani.
Chimeric.
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les 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 123 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
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Matches
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This invention relates to a novel immunogenic composition comprising an Imlast interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate chamman vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR).

CC mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 protein containing a tetanus p30 peptide (immunogen 4) of the invention.
                                                                                                            New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; CoPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; mouse; murine; T-helper epitope; tetanus toxin; P30; mutant; mutein.
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                                                                                                                                                                                                                           Disclosure, SEQ ID NO 13; 89pp; English.
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Best Local Similarity 100.0
....hes 21; Conservative
Ashman C;
                                                      WPI; 2004-239122/22.
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Chimeric.
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Gaps

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WPI; 2004-239126/22.
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                                                                                               Best Local Similarity
                                                                                                                                                                     Clostridium tetani.
                                                                                      Sequence 123 AA;
                                                                                                                                                                           WO200065058-A1.
                                                                                                                                                                                              23-APR-1999;
                                                                                                                                                                                                  06-MAY-1999;
                                                                                                                                                                  sapiens
                                                                                                                                           26-FEB-2001
                                                                                                                                                                                  02-NOV-2000
                                                                                                                                                                                                              Klysner S;
            Ellis JH,
                                                                                                                                     AAB45496;
                                                                                            Query Match
                                                                                                  Matches
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                                                                                                                        RESULT 91
AAB45496
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The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 124;
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100.0%; Pred. No. 5.9e-11;
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Pred. No. 5.9e-11;
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      Example 7; Page 124; 172pp; English.
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Clostridium tetani.
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Best Local Similarity
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                       Sequence 124 AA;
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition occuprises an immunogen that is capable of generating an immune response against self interleukin-13 (IL-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonuclectide containing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a murine IL-13/tetanus toxin P30 epitope
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100.0%; Pred. No. 5.8e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; SEQ ID NO 13; 45pp;
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28-FEB-2003; 2003GB-00004672.
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                                                          (GLAX ) GLAXO GROUP LTD
                                                                                                                              Ashman C;
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administering

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                            Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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100.0%; Pred. No. 6.1e-11;
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    Modified murine interleukin-5 SEQ ID NO: 50
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                                                                                   Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus.
Clostridium tetani.
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                                                                                                             WO200065058-A1.
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06-MAY-1999;
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                                                                                                                                                                                                                                                                 Klysner S;
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Best Local Si
Matches 21
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                                                                                                                                                                                                                                   Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
 Gaps
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Pred. No. 6.1e-11;
Mismatches 0;
                                                                                                                                                                                                         Modified murine interleukin-5 SEQ ID NO: 58.
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 6; Page 164-165; 172pp; English.
                                                                                                                        standard; protein; 128 AA.
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1 Similarity 100.0%; P
21; Conservative 0;
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                            FNNFTVSFWLRVPKVSASHLE
                                           FINITUS FWLR VPKVSASHLE
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99US-0132811P.
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  Conservative
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helminthic infections
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                                                                                                                                                                                                                                                                                         Clostridium tetani.
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21;
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 Matches
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                                                                                              RESULT 93
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Gaps

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Mismatches

21

Length 128; Indels

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
    involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Asthma, IL-5; interleukin-5; allergy, cytokine, helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                       Gaps
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100.0%; Pred. No. 6.2e-11;
ive 0; Mismatches 0;
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100.0%; Pred. No. 6.2e-11;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                              AAB45497 standard; protein; 130 AA.
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                                                                                                                                                                                                                                                                                  FNNFTVSFWLRVPKVSASHLE
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21; Conservative
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                                                                                   it is possible that the the confinithic infections
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Clostridium tetani
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                                                                                                                                          Sequence 130 AA;
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06-MAY-1999;
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Best Local S
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Matches
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                                                                                                                                                    Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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  99US-0132811P
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les 21; Conserv
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                                      (MEBI-) M & E
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06-MAY-1999;
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06-MAY-1999;
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Matches
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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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100.0%; Pred. No. 6.2e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 142-143; 172pp; English.
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99US-0132811P.
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Clostridium tetani.
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06-MAY-1999;
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06-MAY-1999;
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                                                                                                                   02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                          Klysner S;
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Best Local S:
Matches 21
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AAB45528
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention is concerned with methods of treating asthma, eosinophila, allergic trhintis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live accines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                        Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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100.0%; Pred. No. 6.2e-11;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                             Modified murine interleukin-5 SEQ ID NO: 21,
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                                                                                                                AAB45509 standard; protein; 130 AA
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99US-0132811P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      musculus.
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Query Match Best Loc Matches

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Down-regulating interleukin 5 (IL-5) activity in humans by administering
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eosinophilia; vaccine; allergic rhinitis.
        it is possible that they may be used in the treatment of cancer and helminthic infections
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6.2e-11;
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100.0%; Pred. No. 6.3e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                 AAB45498 standard; protein; 132 AA.
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                                                                                                                  21; Conservative
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nes 21; Conservative
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Clostridium tetani.
                                                                                                  Local Similarity
                                                     Sequence 130 AA;
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06-MAY-1999;
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AAB45520
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Matches
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                                             Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or
                                                                                                                                    The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                           IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
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                                                                                                       Example 2; Page 163; 172pp; English.
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Best Local Similarity 100.
Matches 21, Conservative
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helminthic infections
2000-672791/65.
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WPI; 2000-672791/
N-PSDB; AAC68881.
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06-MAY-1999;
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airway hyper-responsiveness, AHR, mucus hyper-secretion, goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30; murine.
                                                                                                                                                                                                                                                            Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                          The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
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100.0%; Pred. No. 6.3e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87 FINETVSFWLRVPKVSASHLE 107
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                                                                                            99DK-00000552.
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28-FEB-2003; 2003GB-00004672.
                                                      19-APR-2000; 2000WO-DK000205
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                  (MEBI-) M & B BIOTECH AS
                                                                                                                                                                                                                             WPI; 2000-672791/65.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 132 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004019974-A2
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Best Local Simil
                                                                                            23-APR-1999;
06-MAY-1999;
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                     02-NOV-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                Asthma, IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia; vaccine, allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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100.0%; Pred. No. 6.3e-11;
ive 0; Mismatches 0;
                                                                                                         Modified human interleukin-5 SEQ ID NO: 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified human interleukin-5 SEQ ID NO: 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 6; Page 149; 172pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB45495 standard; protein; 132 AA.
AAB45520 standard; protein; 132 AA
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99US-0132811P
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                                                                        (first entry)
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1es 21; Conservative
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Clostridium tetani.
                                                                                                                                                                                                                           Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-PSDB; AAC68873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 132 AA;
                                                                                                                                                                                                                                                            WO200065058-A1
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                                                                                                                                               Asthma; IL-5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Asthma; IL-5;
                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                            23-APR-1999;
06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-FEB-2001
                                                                        26-FEB-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Klysner S;
                                     AAB45520;
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Query Match Best Loca Matches

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Gaps

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'note= "Wild type Leu substituted for Val"
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .21
/note= "Tetanus P30 peptide"
                                                                             Disclosure, SEQ ID NO 14; 89pp; English.
                                                                                                                                                                                                       peptide (immunogen 5) of the invention
                                                                                                                                                                                                                                                                                                       ADL63988 standard; protein; 132 AA.
                                                                                                                                                                                                                                                          1 FUNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                  FINETVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                       l Similarity 100.0%;
21; Conservative (
                                                                                                                                                                                                                                                                                                                                (first entry)
      (GLAX ) GLAXO GROUP LTD (ASHM/) ASHMAN C.
                         Ellis JH;
                                      WPI; 2004-239121/22.
                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani.
                                                                                                                                                                                                                    Sequence 132 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Misc-difference
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                         Ashman C,
                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                               Mus sp.
Chimeric.
                                                                                                                                                                                                                                                                                                                   ADL63988;
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Matches
                                                                                                                                                                                                                                                                                         RESULT 106
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This invention relates to a novel immunogenic composition comprising an Initarleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell captiopes. Specifically, it refers to a method for producing a human chineric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chineric IL-13 sequences as having a similar conformational shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, attributable to non-human mammalian species, to enhance its immunogenicity, accordingly, the method results in a reduction in airay hyper-responsiveness (AHR).

The airays and skin intritation, as well as reducing the requirement for inhaled corticostercids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to transmativity duals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric murine IL-13 protein with humanised amino acid inventions containing a tetanus p30 peptide (immunogen 6) of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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                                                                       note= "Wild type Gly substituted for Ala"
                           note= "Wild type Tyr substituted for Phe"
                                                                                                                                                                                                                                  /note= "Wild type His substituted for Arg"
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                                                                                                                                                                                 /note= "Wild type Gln substituted
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100.0%; Pred. No. 6.3e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 15; 89pp; English
                                                                                                                          /note= "Wild type Ser
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28-FEB-2003; 2003GB-00004672.
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Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GLAX ) GLAXO GROUP LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ellis JH;
                                                                                                                                                         Misc-difference 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-239121/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ASHM/) ASHMAN C
Misc-difference
                                                 Misc-difference
                                                                                                       Misc-difference
                                                                                                                                                                                                          Misc-difference
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                                                                                                                                                                                                                                                                                         WO2004019974-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention
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                                                                                                                                                                                                                                                                                                                                             This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune cresponse by recognishing human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human configuration of a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 conformational shape to native human IL-13 conhuman mammalian species, to enhance its immunogenicity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, conhuman myper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide contains of the intermise match match mitting IL-13 protein containing a tetamus p30
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                                                                                                                                                                                            New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mouse; immunogenic; IL-13; interleukin-13; vaccine;
airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30; murine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric murine IL-13 protein with tetanus toxin p30 peptide SeqID 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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Gaps

; 0

Chimeric murine IL-13 protein with tetanus toxin p30 peptide SeqID 15.

(first entry)

03-JUN-2004

ADL63912;

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airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30; murine.
immunogenic; IL-13; interleukin-13; vaccine;
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Clostridium tetani.

Chimeric

Synthetic

.. .21 'note= "Tetanus P30 peptide" location/Qualifiers Peptide

Misc-difference

note= "Wild type Ser substituted for Thr" note= "Wild type Misc-difference

Misc-difference

for Ala" note= "Wild type Tyr substituted for note= "Wild type Gly substituted Misc-difference

note= "Wild type Gln substituted for Asn" note= "Wild type Ser substituted Misc-difference Misc-difference Misc-difference

note= "Wild type His substituted for Arg"

WO2004019975-A2.

11-MAR-2004.

28-AUG-2003; 2003WO-GB003729

30-AUG-2002; 2002GB-00020211. 28-FEB-2003; 2003GB-00004672.

(GLAX) GLAXO GROUP LTD.

Ellis JH, Ashman C;

WPI; 2004-239122/22.

New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.

Disclosure; SEQ ID NO 15; 89pp; English

This invention relates to a novel immunogenic composition comprising an immune IL-13 (interleukin-13) element that is capable of driving an immune C IL-13 (interleukin-13) element that is capable of driving an immune C response by recognishing human IL-13 and one or more foreign T-cell cepttopes. Specifically, it refers to a method for producing a human C chimeric IL-13 immunogen formulated in an appropriate manner to generate the human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to travat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric murine IL-13 protein with humanised amino acid increase. invention

Sequence 132 AA;

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This invention relates to a novel immunogenic composition comprising an Immune response by recognising human IL-13 and one or more foreign T-cell response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), the airways and skin irritation, as well as reducing the requirement for inhaled corticostercides (ICS). As such, these compositions, which exhibit dermatological and antisathmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive sulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric murine IL-13 protein containing a tetanus p30
                                       ö
                                                                                                                                                                                                                                                                                                                                                   mouse; immunogenic; IL-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; chimeric; tetanus p30; murine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                      Chimeric murine IL-13 protein with tetanus toxin p30 peptide SeqID 14.
                                       Gaps
                                     ;
0
 Length 132;
                                     Indels
                 Pred. No. 6.3e-11;
Mismatches 0;

    .21
    /note= "Tetanus P30 peptide"

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                                                                                                                                                                                                         ADL63911 standard; protein; 132 AA
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                                                                                                              FNNFTVSFWLRVPKVSASHLE 21
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                                                                         1 FNNFTVSFWLRVPKVSASHLE
100.0%;
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                    (first entry)
                                     21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium tetani.
                 Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus sp.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ellis JH,
Query Match
                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                     RESULT 108
                                   Matches
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us-09-806-703a-14.rag

Length 132;

52

Page

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Query Match
Best Local (
                       Matches
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                                                                                                            ADL97895
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunosen that is capable of generating an immunos response against self interleukin-13 [L-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonuclectide containing at least one unmethylated CG motif and a saponin. The IL-13 epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a murine IL-13/tetanus toxin P30 epitope immunogen of the invention.
                                                                                                                                                                                                                                             Interleukin-13; IL-13; self immunogen, CpG oligonucleotide, saponin, asthma, chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; mouse; murine; T-helper epitope; tetanus toxin; F30; mutant; mutein.
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                          Murine IL-13/tetanus toxin P30 epitope immunogen 5, SEQ ID NO:14.
                                                               ;
0
                                          Length 132;
                                                              0; Indels

    .21
    /note= "Tetanus toxin P30 epitope"

                                                     6.3e-11;
                                          DB 8;
                                                              Mismatches
                                          Score 112;
Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 14; 45pp; English.
 the invention
                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                          ADL97894 standard; protein; 132 AA.
                                100.0%; Scu-
100.0%; Pre-
0; 1
                                                                                                1 FNNFTVSFWLRVPKVSASHLE 21
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28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                                                                          28-AUG-2003; 2003WO-GB003721
                                                                                                                                                                                                    (first entry)
                                                   Best Local Similarity 100.
Matches 21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GLAX ) GLAXO GROUP LTD.
peptide (immunogen 5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-239126/22.
                                                                                                                                                                                                                                                                                                             Mus sp.
Clostridium tetani.
Chimeric.
                     Sequence 132 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                WO2004019979-A2
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                                                                                                                                                                                ADL97894;
                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                  Region
                                                                                                                                      RESULT 109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; human; mouse; murine; T-helper epitope; tetanus toxin; P30; mutant; mutein.
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric IL-13/tetanus toxin P30 epitope immunogen 6, SEQ ID NO:15.
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                                                                        Indels
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Score 112; DB 8;
Pred. No. 6.3e-11;
. Mismatches 0;
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Pred. No. 6.3e-11;
                                          Pred. No. 6.3
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                    standard; protein; 132 AA.
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                                                                                                                              1 FUNFTVSFWLRVPKVSASHLE
                                                                                                                                                                        FINITIONS FWLR VPKVSASHLE
            th 100.0%;
| Similarity 100.0%;
| Conservative 0;
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100.0%;
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28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2004-239126/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus sp.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
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                                                                                                                                                                                                                                                                                                                                                                                          ADL97895;
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Sequence 133 AA;
                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention relates to a novel immunogenic composition comprising an regonse by recognising human II-13 (anterleukin-13) element that is capable of driving an immune response by recognising human II-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric II-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric II-13 sequences as having a similar conformational shape to native human II-13 con-human mammallan species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiaschmatic activities, can be used via gene therapy to trave tindividuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human II-13 protein containing an N-terminal
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                                                                                                                                                                                                                          airway hyper-responsiveness; AHR; mucus hyper-secretion;
gobblet cell meteaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; aschma; atopic dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New immunogenic composition comprising an interleukin-13 (IL-13) element
   Gaps
                                                                                                                                                                                    Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 12
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  Indels
                                                                                                                                                                                                           human; immunogenic; IL-13; interleukin-13; vaccine;
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    /note= "Tetanus P30 peptide"

 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                             ADL63985 standard; protein; 133 AA
                         21
                                        FINITIONS FWLRVPKVSASHLE 21
                        FNNFTVSFWLRVPKVSASHLE
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28-FEB-2003; 2003GB-00004672.
                                                                                                                                                             (first entry)
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GLAX ) GLAXO GROUP LTD. (ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                           chimeric; tetanus p30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ellis JH;
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                                                                                                                                                                                                                                                                                                   Homo sapiens.
Clostridium tetani.
Chimeric.
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 Matches
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                                     Gaps
                                                                                                                                                                                                                                                                                                                             Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 18
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 Length 133;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note= "Wild type Thr substituted for Ser'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note= "Wild type Arg substituted for Lys'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for Arg'
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                                     Indele
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                                                                                                                                                                                                                                                                                                                                                                 human; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note= "Wild type Val substituted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note= "Wild type His substituted
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Score 112; DB 8;
Pred. No. 6.4e-11;
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                                     Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 chimeric; tetanus p30; mutant; mutein
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                                                                         1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                           1 FUNFTVSFWLRVPKVSASHLE 21
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100.0%;
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                       (first entry)
                                     Conservative
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Chimeric.
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                 Similarity
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                                 21;
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Ouery Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein
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                                                                                                                                                                         RESULT 112
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human; immunogenic; IL-13; interleukin-13; vaccine;
                                                                          Disclosure; SEQ ID NO 18; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                  22. .133
/note= "IL-13 protein"
                                                                                                                                                                                                                                                                                                                                                           chimeric; tetanus p30; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                               ADL64007 standard; protein; 133
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                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                              Conservative
     (GLAX ) GLAXO GROUP LTD.
(ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                                                                                                                                                          1. .21
/note=
                       Ellis JH;
                                  WPI; 2004-239121/22.
                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
Clostridium tetani.
Chimeric.
                                       N-PSDB; ADL63991.
                                                                                                                                                                                                       Sequence 133 AA;
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                      Ashman C,
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                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
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Peptide
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune CC IL-13 (interleukin-13) element that is capable of driving an immune CC response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate CC a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity, accordingly, contravays and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive sequence is the chimeric human IL-13 protein containing non-human amino acid substitutions and an N-terminal tetanus p30 peptide (immunogen 10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                          'note= "Wild type Thr substituted for Ser'
                                                                              'note= "Wild type Arg substituted for Lys"
                                                                                                                                                                                                                                                     'note= "Wild type Glu substituted
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                                                                                                                                         "Wild type Glu
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28-FEB-2003; 2003GB-00004672.
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune response by recognishing human IL-13 and one or more foreign T-cell captopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate channer vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), the method results in a reduction in airway hyper-responsiveness (AHR), the method results in intritation, as well as reducing the requirement for the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy CC to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 protein containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the interpretation in the containing non-human amino the containing non-human amino the containing non-human am
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epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimeric human IL-13 protein with tetanus toxin p30 peptide SegID 19.
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Sequence 133 AA;

"Tetanus P30 peptide"

Val"

for Arg'

for Ile"

for Asp'

Thr.

for Gln"

for Arg" for

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28-FEB-2003; 2003GB-00004672
                                  (GLAX ) GLAXO GROUP LTD.
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                                                                                                                                                                                                                                                                                                                                                                                                                          therapy;
                                                                                                                                                                                                                                                                                                                                                                human; immunogenic; IL-13; interleukin-13; vaccine;
airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therap
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30; mutant; mutein.
                                                       Gaps
                                                                                                                                                                                                                                                                                                                              Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 19
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                   Length 133;
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                                                   Indels
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                 DB 8;
                                6.4e-11;
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             100.0%; Score 112; D
100.0%; Pred. No. 6.4
:ive 0; Mismatches
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                                                                                                               FINITIONS FWLR V PKVSASHLE
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                                                                                                                                                                                                                                                                                           (first entry)
                                                   21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
             Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell cepitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate channer of a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, attributable to con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in air-ay hyper-responsiveness (AHR).

The airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to travat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPP), asthma or atopic dermatitis. This polypeptide sequence is the chimeric human IL-13 protein containing non-human amino containing channers in the chimeric human IL-13 protein containing non-human amino containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing containing contai
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                                                                                                                                                                                                                                 New vaccine composition useful for treating asthma, Chronic obstructive
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                                                                                                                                                                                                                                                                                 dermatitis, comprises an
                                                                                                                                                                                                                                                                       pulmonary disease or atopic disorders, e.g. dermatitis, comprii
immunogen generating an immune response against interleukin-13
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    .21
    /note= "Tetanus P30 peptide"

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Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 19; 89pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chimeric, tetanus p30.
Ashman C;
                                                                                 WPI; 2004-239122/22.
N-PSDB; ADL63916.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 133 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004019975-A2
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Ellis JH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADL63909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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note= "Wild type Arg substituted for Lys" note= "Wild type Thr substituted for Ser"

"Tetanus P30 peptide"

'note=

22. .133 /note= "IL-13 protein"

"Wild type Glu substituted note= "Wild type Met substituted

'note=

"Wild type Gly substituted "Wild type lys substituted "Wild type His substituted

note=

'note= 'note=

note=

note= "Wild type Val substituted

for 11e

for Arg' for

"Wild type lys substituted 'note= "Wild type Leu substituted "Wild type Lys substituted for Arg" "Wild type Glu substituted for Gln"

"Wild type Arg substituted for

'note=

/note=

note=

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30-AUG-2002; 2002GB-0002011.
28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                                                                  Misc-difference 117
                                                            Misc-difference
                                                                                              Misc-difference
                                                                                                                                    Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAR-2004.
       This invention relates to a novel immunogenic composition comprising an IL-13 (interleutin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 equences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-thuman mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive sequence is the chimeric human IL-13 protein containing an N-terminal equations, as all the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        airway hyper-responsiveness; AHR; mucus hyper-secretion;
goblet cell metaplasia; sub-epithelial fibrosis; skin irritation;
inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy;
chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis;
chimeric; tetanus p30; mutant; mutein.
                                                                                                                                                                                                                                 New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chimeric human IL-13 protein with tetanus toxin p30 peptide SeqID 18
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Best Local Similarity 100.0%; Score 112; DB 8; Length 133;
Best Local Similarity 100.0%; Pred. No. 6.4e-11;
Matches 21; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 12; 89pp; English.
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1. .21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
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                                                                    30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                   28-AUG-2003; 2003WO-GB003729
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                                                                                                                           (GLAX ) GLAXO GROUP LTD
                                                                                                                                                           Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 133 AA;
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11-MAR-2004
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This invention relates to a novel immunogenic composition comprising an Interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell cepitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate chimeric IL-13 immunogen formulated in an appropriate manner to generate concument vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 con-human mammalian species, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithalial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasehmmaic activities, can be used via gene therapy to transel individuals suffering from or susceptible to chronic obstructive contractions in along and an IL-13 protein containing non-human amino containing non-human amino containing in the chimeric human IL-13 protein containing non-human amino containing and an N-terminal tetanus p30 peptide (immunogen 9) of
                                                                                                                                                                                          Chronic obstructive
                                                                                                                                                                              New vaccine composition useful for treating asthma, Chronic obstructipulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
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WPI; 2004-239122/22.
N-PSDB; ADL63915.
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(first entry)

FNNFTVSFWLRVPKVSASHLE 21

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Human IL-13 mutant/tetanus toxin P30 epitope immunogen 9, SEQ ID NO:18.
                                                                                                                                                                                                                                                                              Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; human; T-helper epitope;
                                                                                                                                                                                                                                                                                                                                                                 tetanus toxin; P30; mutant; mutein.
                                                                                                                     ADL97936 standard; protein; 133
                                                                                                                                                                                                    03-JUN-2004
                                                                                                                                                            ADL97936;
                                                                                  RESULT 118
                                                                                                       ADL9793
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immunos response against self interleukin-13 (IL-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonucleotide containing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD,
                                                                                                                                                                                                                                                                                                                                          Human IL-13 mutant/tetanus toxin P30 epitope immunogen 10, SEQ ID NO:19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a human IL-13-derived immunogen of the invention which comprises a further mutated version of human IL-13 immunogen 1 and the tetanus toxin P30 epitope.
                                                                                                                                                                                                                                                                                                                                                                           Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antiallergic; dermatological; human; T-helper epitope;
                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                           ö
    Length 133;
                                         Indels
  100.0%; Score 112; DB 8;
100.0%; Pred. No. 6.4e-11;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                tetanus toxin; P30; mutant; mutein.
                                                                                                                                                                                                                    ADL97937 standard; protein; 133 AA.
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                                                                              FNNFTVSFWLRVPKVSASHLE
                                                                                                       1 FNNFTVSFWLRVPKVSASHLE
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28-FEB-2003; 2003GB-00004672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-AUG-2003; 2003WO-GB003721
                                                                                                                                                                                                                                                                                                   (first entry)
Query Match 100.
Best Local Similarity 100.
Matches 21; Conservative
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N-PSDB; ADL97899.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
Clostridium tetani.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO2004019979-A2.
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                                                                                                                                                                                                                                                           ADL97937;
                                                                                                                                                                               RESULT 117
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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition comprises an immunogen that is capable of generating an immune response against self interleukin-13 [L-13] and an adjuvant composition comprising a combination of an immunostimulatory oligonucleotide containing at least one unmethylated CG motif and a saponin. The IL-13 immunogen is preferably a human IL-13 supplemented with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a human IL-13-derived immunogen of the invention which comprises human IL-13 immunogen 1 (ADL97933 and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 112; DB 8;
100.0%; Pred. No. 6.4e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 18; 45pp; English.
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                                                                                                                                                                                                                                                                                               28-AUG-2003; 2003WO-GB003721.
                                                                                                                                                                                                                                                                                                                                                           30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GLAX ) GLAXO GROUP
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Homo sapiens.
Clostridium tetani.
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                                                                                                                                                                  WO2004019979-A2
                                                                                                                                                                                                                                  11-MAR-2004.
                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S:
Matches 21
                                                                      Chimeric
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Gaps

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100.0%; Score 112; DB 8; Length 133; 100.0%; Pred. No. 6.4e-11; ive 0; Mismatches 0; Indels 0

Best Local Similarity 100. Matches 21; Conservative

Query Match

encephalopathy;

Amyloid disease, amyloid fibril deposition, amyloid plaque, immunogenic, antibody, vaccine, Alzheimer's disease, type 2 diabetes; reactive system amyloidosis; systemic senile amyloidosis; familial amyloid cardiomyopathy, transmissible spongiform encephalopathy, creuzzfeld-Jakob disease, Kuru, haemodialysis-asssociated beta-2-microglobulin deposition, amyloid beta peptide, universal T-cell epitope, neuroprotective.

Amyloid beta tetanus toxoid/HA/CS fusion protein, SEQ ID NO:25.

(revised)
(first entry)

11-SEP-2003 27-MAR-2001

AAB49089;

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The invention relates to a vaccine composition for treating asthma or COPD (chronic obstructive pulmonary disease). The vaccine composition or comprises an immunogen that is capable of generating an immune response against self interleukin-13 (IL-13) and an adjuvant composition comprising a combination of an immunostimulatory oligonucleotide containing at least one unmethylated CG motif and a saponin. The IL-13 finunogen is prefetably a human IL-13 backbone substituted with foreign T-helper epitopes, or is a non-human IL-13 backbone substituted with human IL-13 epitopes. The vaccine composition is useful for treating asthma or COPD, or atopic disorders such as hayfever, contact allergies or dermatitis. The present sequence represents a human IL-13/tetanus toxin P30 epitope
                                                                                                                                                                            Interleukin-13; IL-13; self immunogen; CpG oligonucleotide; saponin; asthma; chronic obstructive pulmonary disease; COPD; atopic disorder; hayfever; contact allergy; dermatitis; vaccine; antiasthmatic; respiratory; antialsergic; dermatological; human; T-helper epitope; tetanus toxin; P30; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaccine composition useful for treating asthma, Chronic Obstructive Pulmonary Disease or atopic disorders, e.g. dermatitis, comprises immunogen generating an immune response against interleukin-13.
                                                                                                                                            Human IL-13/tetanus toxin P30 epitope immunogen 3, SEQ ID NO:12.
                                                                                                                                                                                                                                                                                                                                                                                                'note= "Tetanus toxin P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 12; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                   ADL97892 standard; protein; 133 AA.
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28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunogen of the invention.
                                                                                                          03-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GLAX ) GLAXO GROUP LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-239126/22.
                                                                                                                                                                                                                                                                                     Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2004019979-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 133 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-MAR-2004.
                                                                       ADL97892;
                                                                                                                                                                                                                                                                                                                          Chimeric.
                                                                                                                                                                                                                                                                                                                                                              Key
Region
RESULT 119
                    ADL97892
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01-JUN-2000; 2000WO-US015239.

(NEUR-) NEURALAB LTD

01-JUN-1999;

WPI; 2001-070921/08.

Schenk DB;

Plasmodium falciparum.

Chimeric.

WO200072876-A2

07-DEC-2000.

Clostridium tetani. Influenza virus.

Homo sapiens.

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                   Gaps
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0
DB 8; Length 133;
                 Indels
Score 112; DB 8;
Pred. No. 6.4e-11;
; Mismatches 0;
                                 21
                                        ö
                              1 FNNFTVSFWLRVPKVSASHLE
100.0%;
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The invention relates to a novel pharmaceutical composition for preventing or treating a disease characterised by amyloid fibril deposits (amyloid plaques) in a patient. The pharmaceutical composition comprises an agent that will induce an immune response against an amyloid component, or an antibody or antibody fragment that binds to an amyloid component. The invention also relates to a method for determining the component. The invention also relates to a method for determining the involves measuring a patient undergoing treatment for an amyloid disorder which involves measuring a patient serum amount of immunoreactivity against a component. The involves measuring a patient serum immunoreactivity of at least contracted amyloid component. A patient serum immunoreactivity of at least contracted amyloid compositions of the invention are useful for treating a prognosis of improved status with respect to the disorder. The prognositions of the invention are useful for treating a vide variety of disorders include Alahaimer's disease characterised by amyloid beta peptide fibril deposits; type 2 diabetes characterised by amyloid beta apptide fibril deposits; type 2 diabetes characterised by amyloid obst associated with systemic inflammatory diseases (e.g., captified from serum amyloid A protein (ApoSSA); systemic senile amyloid arthritis, osteomyelitis, tuberculosis) characterised by Attibula derived from serum amyloid A protein (ApoSSA); systemic senile composition and beta-2-microglobulin deposits which form as a creephalpopaths as (Eurl Appasant) fusion protein deposits; and beta-2-microglobulin deposits which form as a center and beta-2-microglobulin deposits which form as a composition to treat or prevent Alzheimer's disease. (Updated on 11-SEP-CCC 2003 to standardise Os field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pharmaceutical composition comprising immunogen against amyloid component such as fibril peptide or protein, or antibody against amyloid component useful for treating amyloid diseases or amyloidoses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 46; 140pp; English.
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Sequence 136 AA;

AAB49089 standard; protein; 136 AA.

RESULT 120

à 셤 AAB49089 ID AAB4 XX

Query Match

DB 4; Length 136; 100.0%; Score 112;

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Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated thus raturovaccines nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections
                                     Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carrier protein; CD4+; T cell epitope; N6; N10; N19; immunogen; encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polyepitope carrier protein construct amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 112; DB 3;
100.0%; Pred. No. 6.8e-11;
ive 0; Mismatches 0;
              Modified human interleukin-5 SEQ ID NO: 11
                                                                                                                                                                                                                                                                                                                                                                                             Example 10; Page 127; 172pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY49252 standard, protein; 143 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119 FUNFTUSFWLRVPKVSASHLE
                                                                                                                                                                                19-APR-2000; 2000WO-DK000205.
                                                                                                                                                                                                          99DK-00000552.
99US-0132811P.
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Best Local Similarity 100.
                                                                                                                                                                                                                                                   (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                          WPI; 2000-672791/65.
                                                                                 Homo sapiens.
Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 141 AA;
                                                                                                                          WO200065058-A1
                                                                                                                                                                                                          23-APR-1999;
06-MAY-1999;
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                                                                                                                                                    02-NOV-2000
                                                                                                                                                                                                                                                                               Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention is concerned with methods of treating asthma, eosimophilia, allergic rinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of canner and
                                                                                                                                                                                                                                                               Asthma, IL-5, interleukin-5, allergy, cytokine, helminthic infection, cancer, eosinophilia, vaccine, allergic rhinitis.
                             Gaps
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                           Indels
        Pred. No. 6.5e-11;
                                                                                                                                                                                                                                   Modified murine interleukin-5 SEQ ID NO: 22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 10; Page 137; 172pp; English
                                                                                                                                                 AAB45510 standard; protein; 139 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB45499 standard; protein; 141 AA
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100.08; Lt.
                                                                   52 FUNFTVSFWLRVPKVSASHLE
                                                    1 FNNFTVSFWLRVPKVSASHLE
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99US-0132811P
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                        21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-672791/65.
                                                                                                                                                                                                                                                                                                                       Clostridium tetani.
           Best Local Similarity
Matches 21; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 139 AA;
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                                                                                                                                                                                                                                                                                                          musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-1999;
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                                                                                                                                                                              AAB45510;
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Matches
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Gaps

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21

Length 141; Indels

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                                                                                                                                                                        The invention provides carrier proteins comprising at least 5 CD4+ T cell epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonucleotide molecules that encode peptide epitopes; (b) annealing the oligonucleotides to form duplexes; (c) introducing the duplexes into an expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a culture of the host cells. The carrier protein can be used as a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N6 polyepitope carrier protein construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions.
                                                                                              Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asthma, IL-5; interleukin-5; allergy, cytokine, helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 112; DB 3;
100.0%; Pred. No. 6.9e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Modified murine interleukin-5 SEQ ID NO: 60.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB45530 standard; protein; 145 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                            Disclosure, Fig 2, 76pp, English.
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               Grandi G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-672791/65.
                                             WPI; 2000-023325/02.
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                                                                N-PSDB; AAZ31414
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 143 AA;
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06-MAY-1999;
                Rappuoli R,
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            The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
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0
                                                                                                                                                                                                100.0%; Score 112; DB 3; Length 145; 100.0%; Pred. No. 7e-11;
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                                                                                                                                                                                                                                  0; Indels
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                                                                                                                                                                                                                                0; Mismatches
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                                                                                                                                                                                                                                                                                            101 FNNFTVSFWLRVPKVSASHLE 121
                                                                                                                                                                                                                                                                 21
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                                                                                                                                                                                                                                                               1 FNNFTVSFWLRVPKVSASHLE
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Best Local Similarity (100)
                                                                                                                                                                                                                               21; Conservative
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                                                                                                                               helminthic infections
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                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
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                                                                                                                                                                 Sequence 145 AA;
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06-MAY-1999;
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(first entry)

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Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                        Human tumour necrosis factor-alpha, TNF-alpha, TNF-alpha analogue, vaccine, rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer, disseminated sclerosis, diabetes, psoriasis, osteoporosis,
                                    AAW81335 standard; protein; 158 AA.
                                                                                                                                                    TNF30-4, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (FERR ) FARM LAB FERRING AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jensen MR, Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1998-594561/50.
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                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                 WO9846642-A1.
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                                                                                                                21-APR-1999
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                                                                                                                                                                                                                                                                                                                                                                                   22-OCT-1998
                                                                                                                                                                                                                                                                                       Synthetic
                                                                          AAW81335;
                                                                                                                                                                                                                                                       asthma.
RESULT 127
                    AAW81335
                                        The present sequence represents a modified human tumour necrosis factoralpha analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of thematoid arthritis, Crohn's disease, ulcerative colitis, cancer of any capture. Sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                   Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis; cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 2; Length 158; 100.0%; Pred. No. 7.8e-11; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 16; Page 76-77; 134pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jensen MR, Mouritsen S, Elsner H,
                                                                                                                                                  AAW81333 standard; protein; 158 AA.
                                                  FINETVSFWLRVPKVSASHLE 123
                  21
                  FINIFIVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                   TNF30-2, a TNF-alpha analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-DK000157.
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97US-0044187P.
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                                                                                                                                                                                                                             (first entry)
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N-PSDB; AAV68422.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 158 AA;
                                                                                                                                                                                                                               21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                        AAW81333;
                  Н
                                                    103
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                                                                                                                                                                                                                                                                                                                                                                 asthma.
                                                                                                          RESULT 126
                                                                                                                                  AAW81333
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Dalum I;

Elsner H,

97DK-00000418. 97US-0044187P

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The present sequence represents a modified human tumour necrosis factoralpha analogue. The analogues have no residual TMF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TMF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TMF alpha, has at least one fragment of TMF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TMF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TMF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any contains and substitutions and substitutions, diabetes, psoriasis, osteoporosis and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 112; DB 2; Length 158; 100.0%; Pred. No. 7.8e-11; tive 0; Mismatches 0; Indels
Example 1; Page 80; 134pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW81336 standard; protein; 158 AA.
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Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 158 AA;
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ID AAW8
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AC AAW8
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FUNFTVSFWLRVPKVSASHLE 21

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21; Conservative

Local Similarity

Best Loc Matches

FINETVSFWLRVPKVSASHLE

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Query Match
                  asthma.
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Matches
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                                                                                                                                                                                                                                                                                                       Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                          Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue;
vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue; vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 2;
100.0%; Pred. No. 7.8e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                      Dalum I;
                                                                                                                                                                                                                                                                                                                                                   Claim 15; Page 81-82; 134pp; English.
                                                                                                                                                                                                                                                     Mouritsen S, Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW81332 standard; protein; 158 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133 FNNFTVSFWLRVPKVSASHLE 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE 21
                     TNF30-5, a TNF-alpha analogue
                                                                                                                                                                         98WO-DK000157.
                                                                                                                                                                                               97DK-00000418.
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                                                                                                                                                                                                                              (FERR ) FARM LAB FERRING AS
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Best Local Similarity
Local 21; Conservative
21-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                              diseases, e.g. cancer.
                                                                                                                                                                                                                                                                         WPI; 1998-594561/50.
                                                                                                                                                                                                                                                                                     N-PSDB; AAV68425.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 158 AA;
                                                                                                            Homo sapiens.
                                                                                                                               WO9846642-A1
                                                                                                                                                                         15-APR-1998;
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                                                                                                                                                                                                                                                     Jensen MR,
                                                                                                Synthetic
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                                                                            asthma.
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The present sequence represents a modified human tumour necrosis factoralpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodeminant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the strands in the front beta-sheet. The TNF-loppa analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any collicia contains and collicia contains and collicia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified human tumour necrosis factor-alpha - comprises immunodominant cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
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100.0%; Pred. No. 7.8e-11;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page 74-75; 134pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAW81334 standard; protein; 158 AA
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                                                                                                                                                                                                                                                                                                                                                                        97DX-00000418.
97US-0044187P.
                                                                                                                                                                                                                                                                                                                 98WO-DK000157,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (FERR ) FARM LAB FERRING AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jensen MR, Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21; Conservative
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N-PSDB; AAV68421.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 158 AA;
                                                                                          Synthetic.
Homo sapiens.
                                                                                                                                                                                     WO9846642-A1
                                                                                                                                                                                                                                                                                                              .5-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                        24-APR-1997;
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Homo sapiens.
                                                                                                                                                                                                                                                22-OCT-1998.
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The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TNF-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid architis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (I) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory disease. The present sequence represents a human TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; ectylpyridinium chloride; immunisation; antiinflammatory; antiheumatic; antiarthritic; antiulcer; cytostatic, antidiabetic; antipporiatic; antisathmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                           Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 5; Length 158; 100.0%; Pred. No. 7.8e-11;
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                                                                                              Bouman MHEM;
                                                                                                                                                                                                                                                                                                                             Claim 21; Page 48-49; 55pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABB07279 standard; protein; 158 AA
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  21-JUN-2000; 2000DK-0000966
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                                                                                            Olesen OF, Balchen
                                                                                                                                       WPI; 2002-114542/15.
N-PSDB; ABA94392.
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                                                (FERR ) FERRING BV.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 analogue TNF30-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 158 AA;
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                                                                                                                                                                                                                                                                                  solubilizer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence represents a modified human tumour necrosis factoralpha analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of alpha analogues are used as vaccines for treatment or prevention of theumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any cant, disseminated sclerosis, diabetes, psoriasis, osteoporosis and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human; TNF30-1.
                                                                                                                                                                                                                                                                                                                                                                  Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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100.0%; Score 112; DB 2; Length 158;
Best Local Similarity 100.0%; Pred. No. 7.8e-11;
Matches 21; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                         Dalum I;
                                                                                                                                                                                                                                                     Mouritsen S, Elsner H,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 14; Page 78; 134pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human TNF-alpha analogue TNF30-1.
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                                                                                                                                   97DK-00000418
97US-0044187P
                                                                                         98WO-DK000157
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                                                                                                                                                                                                      (FERR ) FARM LAB FERRING AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                   WPI; 1998-594561/50.
                                                                                                                                                                                                                                                                                                                           N-PSDB; AAV68423
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                                                                                       15-APR-1998;
                                                                                                                                                           24-APR-1997;
WO9846642-A1
                                                                                                                                     15-APR-1997;
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                                                                                                                                                                                                                                                         Jensen MR,
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RESULT 131

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Gaps

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0; Indels

Claim 21; Page 41; 55pp; English.

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N-PSDB; ABA94389.
                  Query Match
                        RESULT 133
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prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein delected from modified TNF-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid disease, cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TNP (tumour necrosis factor)-alpha in a human for immunisation of a human subject or for treatment of a human analogue TNF-alpha analogue TNF-alpha
Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting
                                                                                                                                                                                                                                                                                                                               The invention provides a pharmaceutical vaccine composition (I)
                                                                                                                                                                                                                                 Claim 21; Page 42-43; 55pp; English.
                                                                                                                                         solubilizer.
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for the

Sequence 158 AA;

Gaps ; 0 Length 158; 100.0%; Score 112; DB 5; Length 1 100.0%; Pred. No. 7.8e-11; .ive 0; Mismatches 0; Indels 1 FINNFIVSFWLRVPKVSASHLE 21 21; Conservative Similarity Local Best_Loc Matches

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133

ABB07278 standard; protein; 158 AA. 26-MAR-2002 (first entry) ABB07278;

Human TNF-alpha analogue TNF30-2.

TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human; TNF30-2.

Homo sapiens.

WO200197837-A1.

27-DEC-2001.

20-JUN-2001; 2001WO-DK000431.

21-JUN-2000; 2000DK-0000966

(FERR) FERRING BV

Bouman MHEM; Balchen T, Olesen OF,

WPI; 2002-114542/15. N-PSDB; ABA94388.

Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as solubilizer

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                                                                                                                                                                                                                    The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein composition comprises at least one modified immunogenic self-protein acting as a solubilizer. (1) is useful for preventing or treating a self-proteins, an inflammatory bowel disease (ulcerative colitis or crohn's arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, self-protein such as TMF (tumour necrosis factor) -alpha in a human subject. (1) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory disease. The present sequence represents a human TNF-alpha
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Matches
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Ä 61 ABB07274 standard; protein; 158 41 FNNFTVSFWLRVPKVSASHLE (first entry) 26-MAR-2002 ABB07274; RESULT 134 셤

TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antiasthmatic; immunomodulator; neuroprotective; osteopathic; human; INF30-3

Human TNF-alpha analogue TNF30-3.

Homo sapiens.

WO200197837-A1.

27-DEC-2001.

20-JUN-2001; 2001WO-DK000431.

21-JUN-2000; 2000DK-00000966

(FERR) FERRING BV.

Bouman MHEM; Olesen OF, Balchen T,

WPI; 2002-114542/15. N-PSDB; ABA94384

Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as solubilizer.

Claim 21; Page 33-34; 55pp; English.

The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one medifiled immunogenic self-protein (selected from modifiled TNR-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self

inflammatory disease. The present sequence represents a human ${\tt TNF-alpha}$ analogue ${\tt TNF30-4}$

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-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachesia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (I) comprising octylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory, disease. The present sequence represents a human TNF-alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TNP-alpha proteins) and a surfactant capable of acting as a solubilizer. (1) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, theumatoid arthitis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (1) is useful for inducing autoantibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (1) comprising cetylphyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; ectylpyridinium chloride; immunisation; antidiclammatory; antirheumatic; antiatrhritic; antinicer; cytostatic; antidabetic; antipsoriatic; antidathmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of acting as
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                                                                                                                                                                                                                                      Length 158;
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                                                                                                                                                                                                                                    Score 112; DB 5;
Pred. No. 7.8e-11;
; Mismatches 0;
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N-PSDB; ABA94393.
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Best Local Similarity
Matches 21; Conserv
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                                                                                                                                                        analogue TNF30-3
                                                                                                                                                                                              Sequence 158 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                         1. .15
'note= "identical to residues 215-230 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note= "identical to residues 267-375 of human GDF-8"
                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is that of AutoVac construct GDF-8 ext, which consists of the C-terminal 160 amino acids of human growth differentiation factor 8 (GDF-8, see AAF20131) with residues 16-36 substituted by the promiscuous tetanus toxin T-cell epitope P30 (see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note= "Cys-124 may be substituted by Ser to avoid
                                                                                                                                                                                                                                                                                   Growth differentiation factor 8, GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia;
                                                                                ö
                                                          Length 158;
                                                                                                                                                                                                                                                            Growth differentiation factor 8 AutoVac construct GDF-8 ext.
                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Misc-difference 141. .142
/note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                           "tetanus toxoid P30 epitope"
                                            Score 112; DB 5; Lf
Pred. No. 7.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "tetanus toxoid P2 epitope"
                                             100.0%; Scc...
100.0%; Pred. No. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sxample 1, Page 107-108, 110pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ŝ
                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                       AAB20153 standard; protein; 160 AA.
                                                                                                                   108 FNNFTVSFWLRVPKVSASHLE 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Klysner
                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                            cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JUL-2000; 2000WO-DK000413.
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                                                                                                                                                                                                                                     (first entry)
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                                                                    Similarity 100.
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      37. .51
/note= "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52. .160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                .36
                                                                                                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                Homo sapiens.
Clostridium tetani.
Synthetic.
                                  Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200105820-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JUL-1999;
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                                                                                                                                                                                                                                     30-APR-2001
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                                                                                                                                                                                                               AAB20153;
                                                                                                                                                                                                                                                                                                                                                                       Chimeric.
                                                         Query Match
Best Local (
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Region
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                                                                                                                                                                RESULT 136
                                                                                                                                                                             AAB201
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AAB20144) and residues 37-51 substituted by tetanus toxin T-cell epitope P2 (See AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking animals. The vaccines (see AAB20145-53) are capable of breaking cutoclerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope such as P30, with minimal disturbance of the replaced by a T-cell epitope such as P30, with minimal disturbance of the CDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle ears to pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis; tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption.
                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                An osteoprotegerin ligand/tetanus toxoid P30 epitope fusion protein.
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0
                                                                                                                                                                                                                                                                                                          Length 160;
                                                                                                                                                                                                                                                                                                Query Match
100.0%; Score 112; DB 4; Length 1,
Best Local Similarity 100.0%; Pred. No. 7.9e-11;
Matches 21; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15. .77
/note= "residues 158-220 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY84426 standard; protein; 173 AA.
                                                                                                                                                                                                                                                                                                                                                              1 FUNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "His tag"
                                                                                                                                                                                                                                                                                                                                                                                  16 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-DK000481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98DK-00001164.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
99. .17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .14
/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
Clostridium tetani.
Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-271444/23.
N-PSDB; AAZ99973.
                                                                                                                                                                                                                                                                      Sequence 160 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200015807-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY84426;
                                                                                                                                                                                                                                         failure
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                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 137
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The present sequence represents fusion protein of murine osteoprotegerin is a ligand (OPGL) and tetanus toxoid P30 epitope. Osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclasteogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL polypeptides are 87% homologous. OPGL is a potent osteoclast differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at least one OPGL nallogue to induce an immune response in the animal. The method and OPGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
                                                                                                                                                                                                                                                                                                                                                                                                                       ö
      t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis; tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoprosis; bone resorption.
In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              An osteoprotegerin ligand/tetanus toxoid P30 epitope fusion protein.
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                                                                                                                                                                                                                                                                                                                                                                                   Length 173;
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "tetanus toxoid P30 epitope"
134. .188
/note= "residues 262-316 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 112; DB 3; Best Local Similarity 100.0%; Pred. No. 8.6e-11; Matches 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY84423 standard; protein; 188 AA.
                                              Example, Page 102; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "His tag"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98DK-00001164.
98US-0102896P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .133
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Haaning J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                Sequence 173 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200015807-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-SEP-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY84423;
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Mouritsen S;

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with an inserted tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                              New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; mutein; variant; tetanus toxoid; epitope.
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/note= "Tetanus toxoid P30 epitope"
146. .194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 6;
100.0%; Pred. No. 9.8e-11;
ive 0; Mismatches 0;
                                                                                                                                   Voldborg B,
                                                                                                                                                                                                                                                                     Claim 23; Page 159-160; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human TNFalpha variant, TNF34-P2-P30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAO30488 standard; protein; 194 AA.
                                                                                                                                   Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                110 FNNFTVSFWLRVPKVSASHLE 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2. .109
/note= "Human TNF"
110. .124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE
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16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21; Conservative
                                                                                                                                   Klysner S, Nielsen FS,
                  KLYSNER S.
NIELSEN F S.
BRATT T.
PHARMEXA AS.
                                                                                           (MOUR/) MOURITSEN S.
                                                                                                                                                                          WPI; 2003-449558/42.
                                                                           VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 194 AA;
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Unidentified
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chimeric
                                    (NIEL/)
(BRAT/)
                    (KLYS/)
                                                                           (VOLD/)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence represents fusion protein of murine osteoprotegerin is a secreted member of the tumour necrosis factor receptor family, which is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OPGL protein is synthesised as a type II transmembrane protein. The murine and human OPGL COLYpeptides are 87% homologous. OPGL is a potent osteoclast the manner of differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OPGL is also a activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OPGL activity in an animal. The method comprises using at least one OPGL activity in an animal. The method comprises using at least one OPGL polypeptide or subsequence, and/or at method and OPGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                      In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; mutein; variant; tetanus toxoid; epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 188;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110. .130
/note= "Tetanus toxoid P30 epitope"
131. .145
146. .194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 3;
100.0%; Pred. No. 9.5e-11;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human TNFalpha variant, TNF34-P30-P2.
                                                                                                                                 Example; Page 94-95; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  113 FNNFTVSFWLRVPKVSASHLE 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAO30489 standard; protein; 194 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-NOV-2001; 2001DK-00001702,
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-SEP-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
Matches 21; Conservative
                  2000-271444/23.
                                  N-PSDB; AAZ99970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 188 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAO30489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric.
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RESULT 139 AA030489

ઠે 셤 Key Region Region Region Region

2 131-27

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Gaps

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Length 194; 0; Indels

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New protein comprising at least one epitope of membrane immunoglobulin B (IgE) and being free of epitopes of serum IgE, useful for treating an IgE -mediated allergic disease or condition, e.g. asthma, allergic rhinitis
                                                                                                                                                                                                                                                                                                            The present sequence is that of a fusion construct comprising human membrane IgE (mIgE) fused at its N-terminal end to a human IgE leader sequence to enhance protein expression, and fused at its C-terminal end via a proteolytic cleavage site to tetanus toxoid (TT) Th epitope to enhance immune response, and a 6His tag sequence. A plasmid comprising DNA encoding this fusion protein was used as a DNA vaccine to immunise HLA-A2 mice. Epitope-specific responses were observed. The DNA is an example of nucleic acid molecules of the invention that encode a mIgE epitope that is free of serum IgE epitopes and which optionally includes for trating an individual susceptible to, or having, an IgE mediated allergic disease, e.g. asthma, allergic rhinitis, atopic dermatitis, anaphylaxis or urticaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mucin repeat, MUC-1 analogue, vaccination, self-protein, cancer, cytotoxic T-lymphocyte immunity, breast cancer, prostate cancer, cell-associated peptide antigen, foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 112; DB 8; I
100.0%; Pred. No. 1.1e-10;
                                                                                                                                                  Otero M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MUC-1 analogue containing foreign epitopes.
                                                                                                                                                                                                                                                                                     Example 1; SEQ ID NO 6; 37pp; English.
                                                                                                                                                Weiner DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY92665 standard; peptide; 216 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183 FINFTVSFWLRVPKVSASHLE 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 FUNFTVSFWLRVPKVSASHLE 21
                                                             20-JUN-2003; 2003WO-US019383.
                                                                                       20-JUN-2002; 2002US-0390304P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136. .156
/label= P30
/note= "q"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    label= P2
                                                                                                                   (UYPE-) UNIV PENNSYLVANIA
                                                                                                                                                Calarota S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21; Conservative
                                                                                                                                                                          WPI; 2004-071666/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                       N-PSDB; ADH50815
       WO2004000217-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 209 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200020027-A2
                                                                                                                                             Levinson AI,
                                                                                                                                                                                                                                                           or urticaria.
                                   31-DEC-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-APR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY92665
ID AAY9
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                                                                                                                                                                                                                     The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNPalpha variant protein with an inserted teranus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                    New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IgE; antibody; antiallergic; vaccine; antiasthmatic; antiinflammatory; dermatological; immunosuppressive; tetanus toxoid; human.
                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label = p30TT
/note= "Tetanus toxin subunit p30 (aa947-967)"
                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 6; Length 194; 100.0%; Pred. No. 9.8e-11; tive 0; Mismatches 0; Indels C
                                                                                                   Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note= "Tetanus toxin precursor (aa73-99)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Membrane IgE-tetanus toxoid construct, allergy vaccine.
                                                                                                   Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .75. .182
/note= "Protease cleavage site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note= "Protease cleavage site'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l. .18
/label= Signal_peptide
/note= "Human IgE leader"
                                                                                                                                                                                               Claim 23; Page 158; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADH50816 standard; protein; 209 AA.
                                                                                                    Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125 FINFTVSFWLRVPKVSASHLE 145
                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     204. .209
/note= "6His tag"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   = mIgE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      148. .174
/label = TTp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-MAR-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19. .139
/label = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                140. 147
                                                                                                 Klysner S, Nielsen FS,
                KLYSNER S.
NIELSEN F S.
  PHARMEXA AS.
                                                                    MOURITSEN S.
                                                                                                                          WPI; 2003-449558/42.
                                          BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
Clostridium tetani.
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                    Sequence 194 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cleavage-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADH50816;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chimeric
(PHAR-)
(KLYS/)
(NIEL/)
(BRAT/)
(VOLD/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADH50816
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Gaps

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Length 209; Indels

05-OCT-1999; 05-OCT-1998; 20-OCT-1998;

Steinaa L,

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The invention provides carrier proteins comprising at least 5 CD4+ T cell epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonucleotide molecules that encode peptide epitopss; (b) annealing the oligonucleotide molecules that encode peptide epitopss; (b) duplexes into an expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a culture of the host cells. The carrier protein can be used as a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N10
                                                                                                                                                                                                                                                            Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carrier protein; CD4+; T cell epitope; N6; N10; N19; immunogen; N11; encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N11 polyepitope carrier protein construct amino acid sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 112; DB 3; Length 2 Best Local Similarity 100.0%; Pred. No. 1.1e-10; Matches 21; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polyepitope carrier protein construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY49254 standard; protein; 240 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           103 FNNFTVSFWLRVPKVSASHLE 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                     Disclosure; Fig 2; 76pp; English.
99WO-IB000844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98GB-00008932.
                                             98GB-00008932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                        Rappuoli R, Grandi G;
                                                                                                                                                                                          WPI; 2000-023325/02.
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N-PSDB; AAZ31416.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grandi
                                                                                             (CHIR-) CHIRON SPA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CHIR-) CHIRON SPA.
                                                                                                                                                                                                                    N-PSDB; AAZ31415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 218 AA;
27-APR-1999;
                                             27-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9955730-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-NOV-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY49254;
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                   This is an immunogenized WUC-1 analogue containing foreign epitopes P2 and P30. Immunogenic analogues of WUC-1 and, e.g. human prostate specific and P30. Immunogenic analogues of WUC-1 and, e.g. human prostate specific cat membrane antigen (hP8M) can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms (see features table). 10 regions suitable for the insertion of foreign T helper epitopes were identified.

The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. heSM, heregulin 2 (Her2) and/or fibroblast growth factor 80 (EGF8b). The method comprises cfecting simultaneous presentation by antigen producing cells (APCs) of effecting simultaneous presentation by antigen producing cells (APCs) of creaning inmune system of: (1) at least 1 CTL (cyctocxic T-1ymphocyte) group derived from the PA and/or at least 1 first T helper cell group which is confident animal. Analogues of human PSM, human HSM, human HSM, human HSM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human/murine FGFBD comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGFBD and Her2, respectively. Note: This sequence does not appear in the specification. It was made using the mucin repeat sequence (AAY92664), P2 and P30 (AAY92665-26), which appear on pages 220, 213 and 214 respectively, of the specification
                                                                                                                                                                                                                                                                                                       Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                        Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CD4+; T cell epitope; N6; N10; N19; immunogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N10 polyepitope carrier protein construct amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 216;
                                                                                                                                                                                        Haaning J, Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 112; DB 3; 100.0%; Pred. No. 1.1e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                        Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 4; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY49253 standard; protein; 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                               Birk P, Karlsson G;
                 99WO-DK000525.
                                                               98DX-00001261.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-FEB-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 100.
1es 21; Conservative
                                                                                                                                     (MEBI-) M & B BIOTECH AS.
                                                                                                                                                                                        Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encapsulated bacteria.
                                                                                                                                                                                                                                                         WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Carrier protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 216 AA;
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W09955730-A2 04-NOV-1999

Synthetic

AAY49253;

Query Match Matches

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Gaps

WPI; 2001-112680/12.

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20-JUL-2000; 2000WO-DK000413
                                                                                                             (MEBI-) M & E BIOTECH AS.
                                                                                                        20-JUL-1999;
26-JUL-1999;
                                           RESULT 145
                                             AAB20152
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                                      g
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Mouritsen S, Klysner S;

Halkier T,

99DK-00001014 99US-0145275P

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                                                                            epitope. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein comprises at least 1 of N6, N10 or N19. The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) annealing the oligonucleotide molecules that encode peptide epitopes, (b) annealing the oligonucleotides to form duplexes, (c) introducing the oligonucleotides to form duplexes, (c) introducing the into a host cell; and (e) isolating the fusion protein produced from a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N11 polyepitope carrier protein construct
                                                          invention provides carrier proteins comprising at least 5 CD4+ T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .109
/note= "109 C-terminal residues of human GDF-8"
90. .91
/note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "109 C-terminal residues of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth differentiation factor 8 AutoVac construct GDF-8 dimer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 112; DB 3; Length 240; 100.0%; Pred. No. 1.3e-10; ive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "tetanus toxoid P2 epitope" 125..145
/note= "tetanus toxoid P30 epitope" 146..254
/note= "109 C-terminal residues of P35..236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB20152 standard; protein; 254 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE 21
Disclosure; Fig 7; 76pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              103 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 100.
1es 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 240 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200105820-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Si
Matches 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB20152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
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The present sequence is that of AutoVac construct GDP-8 dimer comprising 2 copies of the 109-amino acid C-terminal region of human growth differentiation factor 8 (GPF-8, see AAF20141) covalemently connected through the P2 and P30 T-cell epitopes (see AAB20143-44) of tetanus corrected through the P2 and P30 T-cell epitopes (see AAB20143-44) of tetanus corrected the rank is an object of the invention to produce a recombinant corrected to receive the muscle growth rate of farm animals. The vaccines in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against corrected autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the native sequence is replaced by a T-cell epitope correction of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs activity can increase muscle mass by up to at least 45% in cattle, pigs corrected and poultry used for math advanced and poultry used for math growth is pronounced and for such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                  Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease;
tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5;
IL5; epitope; human; tetanus toxoid; chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 254;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hIL5-P30-P2-hIL5 (hIL5.34) fusion construct protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 112; DB 4;
100.0%; Pred. No. 1.3e-10;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l. .19
'note= "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20. .285
/note= "Mature hIL5.34 protein"
                                                                                                                               Example 1; Page 105-106; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAO30457 standard; protein; 285 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125 FNNFTVSFWLRVPKVSASHLE 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100...
Rest Local Similarity to 100...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 254 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003042244-A2.
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Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-SEP-2003
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Peptide
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(BRAT/)

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct which comprises 2 human interleukin 5 (IL5) monomers joined by tetanus toxoid epitopes p30 and P2. This sequence is used to illustrate the method of the
                                                                                                                                                               New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 285;
                                                                            Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Tetanus toxoid P30 epitope"
273. 287
/note= "Tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 6; 100.0%; Pred. No. 1.5e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20. .287
/note= "Mature hIL5.36 protein"
24. .44
                                                                        Bratt T, Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                     Claim 20; Page 112-113; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 150 FNNFTVSFWLRVPKVSASHLE 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAO30459 standard; protein; 287 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hIL5.36 variant protein.
                                                                          Klysner S, Nielsen FS,
                                     MOURITSEN S.
                                                                                                           WPI; 2003-449558/42.
N-PSDB; AAL61294.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (PHAR-) PHARMEXA AS
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 285 AA;
     BRATT I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
Unidentified.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-SEP-2003
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                                                                                                                                                                                                                                                                                                                                                                                                   invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAO30459;
                      (VOLD/) (MOUR/) N
     (BRAT/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 148
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                                                                                                                                                                                                                                                                                The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a funion construct which comprises 2 human interleukin 5 (ILS) anomers joined by tetamus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the
                                                                                                                                                                                               New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; IL5; epitope; human; tetanus toxoid; chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 112; DB 6; Length 285; 100.0%; Pred. No. 1.5e-10; ive 0; Mismatches 0; Indels (
                                                                                                           Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hILS-P2-P30-hIL5 (hIL5.35) fusion construct protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . .19
note= "Human IL5 leader peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20. .285
/note= "Mature hIL5.35 protein"
                                                                                                       Voldborg B,
                                                                                                                                                                                                                                                  Claim 20; Page 109-110; 196pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                135 FINFTVSFWLRVPKVSASHLE 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAO30458 standard; protein; 285 AA.
                                                                                                         Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-NOV-2001; 2001DK-00001702.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
                                                                                                       S, Nielsen FS,
KLYSNER S.
NIELSEN F S.
BRATT T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (PHAR-) PHARMEXA AS.
(KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
                                                                                                                                           WPI; 2003-449558/42.
                                                                        MOURITSEN S
                                                   VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                             N-PSDB; AAL61293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 285 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2003042244-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-SEP-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                   invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA030458;
                                                   (VOLD/)
(MOUR/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
Peptide
                                                                                                         Klysner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein
                (NIET/)
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Best Loca Matches

ઠ 셤 RESULT 147 AA030458

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Gaps

us-09-806-703a-14.rag

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New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                    Claim 20; Page 115-117; 196pp; English.
                                            Klysner S, Nielsen FS,
                                                           WPI; 2003-449558/42.
                              MOURITSEN S
                    VOLDBORG B.
                                                                  N-PSDB; AAL61295
      (NIEL/)
(BRAT/)
(VOLD/)
(MOUR/)
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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TWF, TWRPIDPA) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct variant which comprises 2 human interleukin 5 (IL5) monomers joined by diglycine linker and including terminally positioned tetanus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the invention Sequence 287 AA;

100.0%; Score 112; DB 6; Length 287; 100.0%; Pred. No. 1.5e-10; ive 0; Mismatches 0; Indels (24 FNNFTVSFWLRVPKVSASHLE 44 1 FUNFTVSFWLRVPKVSASHLE 21 Query Match
Best Local Similarity 100.
Matches 21; Conservative ð g

AAO30460 standard; protein; 287 AA. 22-SEP-2003 AAO30460; AAO30460

Multimeric protein; interleukin 5; ILS; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; interleukin 5; ILS; epitope; human; tetanus toxoid; chimeric; variant; mutant; mutein.

1. .19 /note= "Human IL5 leader peptide" 20. .287 /note= "Mature hIL5.37 protein" Location/Qualifiers Key Peptide Protein

Region

WO2003042244-A2

22-MAY-2003

15-NOV-2002; 2002WO-DK000764

16-NOV-2001; 2001DK-00001702.

New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis. Bratt T, Voldborg B, Claim 20; Page 117-120; 196pp; English. Klysner S, Nielsen FS, KLYSNER S. NIELSEN F S. WPI; 2003-449558/42. N-PSDB; AAL61296. (MOUR/) MOURITSEN S. BRATT T. VOLDBORG B. (BRAT/) (VOLD/) (KLYS/) (NIEL/)

Length 287; Indels 100.0%; Score 112; DB 6; 1 100.0%; Pred. No. 1.5e-10; ive 0; Mismatches 0; 1 FNNFTVSFWLRVPKVSASHLE 21 Query Match
Best Local Similarity 100.
Matches 21, Conservative

ö

Gaps

; 0

ADL64008 standard; protein; 385 AA. 03-JUN-2004 (first entry) ADL64008; RESULT 150 ADL64008

Protein encoded by the expression plasmid pCDNmIL13p30FC.

airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; murine; peptide p30. mouse; immunogenic; IL-13; interleukin-13; vaccine;

Mus sp. Clostridium tetani. Cytomegalovirus. Unidentified

Key Misc-difference 235. 239 /note= "Encoded for by AACCGT"

WO2004019974-A2

11-MAR-2004

28-AUG-2003; 2003WO-GB003703.

30-AUG-2002; 2002GB-00020212

PHARMEXA AS.

Mouritsen S;

Voldborg B,

Bratt T,

Mouritsen

The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (INF, TNRapha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is a fusion construct variant which comprises 2 human interleukin 5 (IL5) monomers joined by diglycine linker and including terminally positioned tetanus toxoid epitopes P30 and P2. This sequence is used to illustrate the method of the invention

Sequence 287 AA;

ö

Gaps . 0

267 FINFTVSFWLRVPKVSASHLE 287

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> (first entry) hIL5.37 variant protein.

Homo sapiens. Unidentified. Chimeric.

74. 38 /note= "Tetanus toxoid P2 epitope" 273. 287 /note= "Tetanus toxoid P30 epitope"

Region

/note= "Encoded for by AACCGT"

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RESULT 152
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune cresponse by recognising human IL-13 and one or more foreign T-cell espitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in a appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, connected the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide minimal that a promitial such and the second plasmid protein sequence of the chimeric minimal that and the second plasmid protein sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal train and the sequence of the chimeric minimal trains the sequence of the chimeric minimal trains the sequence of the chimeric minimal trains the sequence of the chimeric minimal trains and the sequence of the chimeric minimal trains and the sequence of 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                murine IL-13 protein and the tetani p30 peptide under the control of a CMV promoter of the invention. NOTE: This sequence is given in the figure but is not further referred to in the specification.
                                                                                                                                                                                 New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            airway hyper-responsiveness; ARR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; finhaled corticosferoid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; murine; peptide p30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 112; DB 8; Length 385; 100.0%; Pred. No. 2.1e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein encoded by the expression plasmid pCDNmIL13p30FC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mouse; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADL63969 standard; protein; 385 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97 FINFTVSFWLRVPKVSASHLE 117
                                                                                                                                                                                                                                                        Disclosure; Fig 18; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
28-FEB-2003; 2003GB-00004672.
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Matches 21; Conservative
                                  (GLAX ) GLAXO GROUP LTD.
(ASHM/) ASHMAN C.
                                                                                        Ashman C, Ellis JH,
                                                                                                                           2004-239121/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytomegalovirus.
Synthetic.
Unidentified.
                                                                                                                                              N-PSDB; ADL63996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 385 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 151
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune compose by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human II-13 cwhile having sufficient anno acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, che method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide murine IL-13 protein and the tetani p30 peptide under the control of a composition in the figure composition. NOTE: This sequence is given in the figure but is not further referred to in the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N19 polyepitope carrier protein construct amino acid sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
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                                                                                                                                                                                                                                 30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                   28-AUG-2003; 2003WO-GB003729
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                                                                                                                                                                                                                                                                                                                                                    (GLAX ) GLAXO GROUP LTD.
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2004-239122/22.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; ADL63920
WO2004019975-A2.
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                                                                         11-MAR-2004.
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(ASHM/) ASHMAN C.
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Unidentified.
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ADL64010
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                                                                                                                                                                                                                                                                                                               epitope. The carrier protein comprises at least 1 of N6, N10 or N19; The carrier protein comprises at least 1 of N6, N10 or N19; The carrier protein can be prepared by expressing a vector comprising a nucleic acid molecule encoding the protein, in a host cell and recovering the expressed protein. The carrier protein can also be produced by (a) constructing oligonucleotide molecules that encode peptide epitopes; (b) annealing the oligonucleotides to form duplexes; (c) introducing the duplexes into an expression vector; (d) introducing the expression vector into a host cell; and (e) isolating the fusion protein produced from a culture of the host cells. The carrier protein can be used as a protective immunogen in the control of diseases caused by encapsulated bacteria. The present sequence represents the amino acid sequence of N19 polyepitope carrier protein construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mouse; immunogenic; ID-13; interleukin-13; vaccine; airway hyper-responsiveness; AHR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; murine; peptide p30.
                                                                                                                                                                                                                                                                                                   The invention provides carrier proteins comprising at least 5 CD4+ T cell
                                                                                                                                                                                                                  Carrier proteins containing CD4+ epitopes useful for protecting against diseases caused by encapsulated bacteria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 3; Length 390; 100.0%; Pred. No. 2.2e-10; ive 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein encoded by the expression plasmid pCDNmIL13p30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADL64009 standard; protein; 394 AA
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                                99WO-IB000844.
                                                                 98GB-00008932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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Best Local Similarity 100.
                                                                                                                                  Rappuoli R, Grandi G;
                                                                                                                                                                 WPI; 2000-023325/02.
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                                                                                                 (CHIR-) CHIRON SPA
                                                                                                                                                                                  N-PSDB; AAZ31417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 390 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cytomegalovirus.
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                                27-APR-1999;
                                                                27-APR-1998;
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04-NOV-1999
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune CC IL-13 (interleukin-13) element that is capable of driving an immune compares by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 sequences as having a similar conformational shape to native human IL-13 cwhile having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, cmcus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the method results in a reduction in airway hyper-responsiveness (AHR), cmcus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide cmurine IL-13 protein and the tetani p30 peptide under the control of a cmv promoter of the invention. NOTE: This sequence is given in the figure course of turner is not further referred to in the specification.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
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100.0%; Pred. No. 2.2e-10;
ive 0; Mismatches 0;
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                                                                                        30-AUG-2002; 2002GB-00020212
28-FEB-2003; 2003GB-00004672
28-AUG-2003; 2003WO-GB003703
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                                                                                                                                                                                                                                     (GLAX ) GLAXO GROUP LTD
                                                                                                                                                                                                                                                                                                                                                                              Ashman C, Ellis JH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-239121/22.
N-PSDB; ADL63997.
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This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune CC IL-13 (interleukin-13) element that is capable of driving an immune CC response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human conference of a human vaccine. The present inventional shape to native human IL-13 sequences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, con-human mammalian species, to enhance its immunogenicity. Accordingly, mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide is the pCDNcIL13p30newFC expression plasmid protein sequence of the invention. NOTE: This sequence is given in the figure but is not further referred to in the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             airway hyper-responsiveness, ARR; mucus hyper-secretion; goblet cell metaplasia; sub-epithelial fibrosis; skin irritation; inhaled corticosteroid; ICS; dermatological; antiasthmatic; gene therapy; chronic obstructive pulmonary disease; COPD; asthma; atopic dermatitis; murine; peptide p30.
                                                                                                                                                                                                                                                                                                                                                                                 New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 112; DB 8; Length 394; 100.0%; Pred. No. 2.2e-10; tive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Protein encoded by the expression plasmid pCDNmIL13p30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse; immunogenic; IL-13; interleukin-13; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADL63970 standard; protein; 394 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure, Fig 20; 89pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 FNNFTVSFWLRVPKVSASHLE 41
                                                           28-AUG-2003; 2003WO-GB003729
                                                                                                              30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21; Conservative
                                                                                                                                                                                           (GLAX ) GLAXO GROUP LTD
                                                                                                                                                                                                                                                 Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                          WPI; 2004-239122/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                   N-PSDB; ADL63923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 394 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cytomegalovirus.
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Unidentified.
     11-MAR-2004,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADL63970;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADL63970
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune IL-13 (interleukin-13) element that is capable of driving an immune C IL-13 (interleukin-13) element that is capable of driving an immune c Ecception Expectation by the construction and interpretation of the construction and the construction and the construction and the construction and the construction of sequences as having sufficient amino acid sequence diversity, attributable to non-human mammalian species, to enhance its immunogenicity. Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (CDPD), asthma or atopic dermatitis. This polypeptide is the pCDNcIL13p30newFC expression plasmid protein sequence of the invention. NOTE: This sequence is given in the figure but is not further referred to in the specification.
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                                                                                                                                                                                                                                                                                                                                                                                                        New immunogenic composition comprising an interleukin-13 (IL-13) element that drives an immune response recognizing human IL-13 and foreign T-cell epitopes, useful in treating, e.g. asthma or atopic dermatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein encoded by the expression plasmid pCDNcIL13p30newFC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure, Fig 20, 89pp, English.
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                                                                                                      30-AUG-2002; 2002GB-00020212.
28-FEB-2003; 2003GB-00004672.
                                                   28-AUG-2003; 2003WO-GB003703
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
                                                                                                                                                                                     (GLAX ) GLAXO GROUP LTD. (ASHM/) ASHMAN C.
                                                                                                                                                                                                                                                                        Ashman C, Ellis JH;
                                                                                                                                                                                                                                                                                                                        WPI; 2004-239121/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                       N-PSDB; ADL63999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 394 AA;
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Unidentified.
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11-MAR-2004.
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ADL63971;

RESULT 155

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ADL63971

Query Match

Matches

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Gaps

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The (G+C) content of the synthetic gene is increased by 47% wrt the native sequence. This eliminates six "terminator" regions which were found to be present in (A+T) rich regions. The terminators (termination/endo-nucleolytic processing/polyadenylation sites) were previously responsible for incomplete transcription of the mRNA. The elimination of these elements (using codon degeneracy) provided for successful expression in yeast of the tetanus toxin fragment C. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                    DNA sequence encoding tetanus toxin fragment C - useful in the manufacture of vaccines for immunity to tetanus utilising yeast as host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaccine, shed antigen-specific B cell, idiotypic antibody, immune complex-mediated disease, autoimmune disease, tetanus protein,
                                                                                                                                                                                                                                                               Fairweathe NF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 2;
100.0%; Pred. No. 2.6e-10;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amino acid sequence of tetanus toxin fragment C.
                                                                                                                                                                                                                                                             Clare JJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84 FNNFTVSFWLRVPKVSASHLE 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB31427 standard; protein; 453 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure, Fig 2; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               humoral immune response; cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Barbera-Guillem E;
                                                                                                           90EP-00312870.
                                                                                                                                                  89GB-00026832.
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15-JUN-2000; 2000US-00594985.
                                                                                                                                                                                                                  (WELL ) WELLCOME FOUND LTD.
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                                                                                                                                                                                                                                                             Makoff AJ, Romanos MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BIOC-) BIOCRYSTAL LTD
                                                                                                                                                                                                                                                                                                         WPI: 1991-166115/23
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                                                                                                                                                                                                                                                                                                                               N-PSDB; AAQ12121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 452 AA;
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                                                                                                         27-NOV-1990;
                                                                                                                                                    28-NOV-1989;
                                                                                                                                                                         17-MAR-1990;
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                                                             05-JUN-1991
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                    EP430645-A.
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                                                                                                                                                                                                                                                                                                                                                                                                                    organism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB31427;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention relates to a novel immunogenic composition comprising an IL-13 (interleukin-13) element that is capable of driving an immune response by recognising human IL-13 and one or more foreign T-cell epitopes. Specifically, it refers to a method for producing a human chimeric IL-13 immunogen formulated in an appropriate manner to generate a human vaccine. The present invention describes human chimeric IL-13 equences as having a similar conformational shape to native human IL-13 while having sufficient amino acid sequence diversity, attributable to non-human mammalian appecies, to enhance its immunogenicity, Accordingly, the method results in a reduction in airway hyper-responsiveness (AHR), mucus hyper-secretion, goblet cell metaplasia, sub-epithelial fibrosis of the airways and skin irritation, as well as reducing the requirement for inhaled corticosteroids (ICS). As such, these compositions, which exhibit dermatcological and antiasthmatic activities, can be used via gene therapy to treat individuals suffering from or susceptible to chronic obstructive pulmonary disease (COPD), asthma or atopic dermatitis. This polypeptide is the pCDMmIL13p30 expression plasmid protein sequence of the chimeric mucus in the IL-13 protein and the tetani p30 peptide under the control of a CMV promoter of the invention. NOTE: This sequence is given in the figure but is not further referred to in the specification.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      New vaccine composition useful for treating asthma, Chronic obstructive pulmonary disease or atopic disorders, e.g. dermatitis, comprises an immunogen generating an immune response against interleukin-13.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 8; Length 394; 100.0%; Pred. No. 2.2e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                      /note= "Encoded by CCC"
             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR12471 standard; protein; 452 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Fig 19; 89pp; English.
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                                                                                                                                                                                                                               30-AUG-2002; 2002GB-00020211.
28-FEB-2003; 2003GB-00004672.
                                                                                                                                                                                      28-AUG-2003; 2003WO-GB003729
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                                                                                                                                                                                                                                                                                             (GLAX ) GLAXO GROUP LID
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                                                                                                                                                                                                                                                                                                                                        Ellis JH, Ashman C;
                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-239122/22.
                               Misc-difference 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Terminator; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; ADL63921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 394 AA;
                                                                                                  WO2004019975-A2
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05-AUG-1991
                                                                                                                                             11-MAR-2004
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AAR12471;

SXXXBXBXBXXXX

AAR1247

Query Match Matches

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Gaps

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Length 452; Indela

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The present sequence represents a fragment of tetanus protein, which is used as an immunostimulatory protein in vaccines of the invention. The specification describes a method for inducing an immune response reactive with idiotypes present on shed antigen-specific B cells (SAB) of an individual. The method involves administering a vaccine formulation comprising polynucleotide encoding an idiotype of an antibody that binds to an epitope of shed antigen. The method is useful for inducing an immune response reactive with idiotypes present on SAB of an individual. The method is useful for depleting shed antigen-specific B cells, and for treating immune complex-mediated disease progression in organ specific autoimmune disease exacerbated by humoral immune response against groups expressed on shed antigen. Or by plasma cell production of antibodies against groups of shed antigen. It is useful in cancer therapy and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Delivery of a composition to the central nervous system or spinal cord - comprises administration of a non-toxic, proteolytic fragment of tetanus toxin in association with a molecule having biological function.
                  Inducing an immune response against shed antigen-specific B cell idiotypes, by administering a vaccine formulation comprising polymucleotides encoding an idiotypic determinant or peptides comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tetanus toxin fragment C; TTC; central nervous system; CNS; spinal cord; proteolytic fragment; retrograde axonal transport; spinal cord disease; transport; neurodegenerative disease; motoneuron disease; amyotrophic lateral sclerosis; spinal muscular atrophy; therapy; ALS; SMA; neurodegenerative lysosomal storage disease; neuronal mapping.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 4; Length 453; 100.0%; Pred. No. 2.6e-10; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tetanus toxin fragment C protein sequence.
                                                                                                               Example 2; Page 72-73; 81pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Brulet P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY00921 standard; protein; 463 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85 FINFTVSFWLRVPKVSASHLE 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-EP005113.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0055615P.
97US-0065236P.
                                                                                                                                                                                                                                                                                                                                                                                                          treating autoimmune disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-MAY-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Osta Pinzolas R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 100.
Matches 21; Conservative
                                                                          an idiotypic determinant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (INSP ) INST PASTEUR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-180971/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; AAX27234.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 453 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-AUG-1997;
13-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9909057-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY00921;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY0092
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Example 1; Fig 1; 53pp; English

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Gaps

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This sequence represents the tetanus toxin fragment C (TTC). The invention relates to a method for in vivo delivery of a desired composition into a human or animal central nervous system (CNS) or spinal cord comprises administering a non-toxic, proteolytic fragment of tetanus coxin (TT) in association with at least a molecule having a biological toxin (TT) in association with at least a molecule having a biological troxin (TT) in association with at least a molecule having a biological coxin (TT) in association with at least a molecule having a biological coxin (TT) in a manapatic transport into the CNS or the spinal cord of the human or animal and of being delivered to different areas of the CNS or the spinal and of being delivered to different areas of the numns or animals with CNS or spinal cord disease, e.g. neurodegenerative and motoneuron diseases such as amyotrophic lateral sclerosis (ALS), spinal muscular atrophies (SMA) or neurodegenerative lysosomal storage diseases. Compositions comprising hybrid fragments of TT comprising and immunisations. Use of TT comprising fragments A, B and C results in the fragment C fragment C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 2; Length 463; 100.0%; Pred. No. 2.7e-10;
                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         343. .357
/note= "Tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Tri-glycine linker"
162. .182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human TNFalpha variant (TNF_T2) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                  FINITIVSFWLRVPKVSASHLE 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAO30491 standard; protein; 514 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183. .339
/note= "Human TNF"
340. .342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358. .514
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-NOV-2002; 2002WO-DK000764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .161
                                                                                                                                                                                                                                                                                                                                                                21; Conservative
                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                   Sequence 463 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA030491;
                                                                                                                                                                                                                                                                                                                                  Query Match
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                                                                                                                                                                                                                                                                                                                                                   Local
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Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 160
                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA030491
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(PHAR-) (KLYS/) (NIEL/) (BRAT/) (VOLD/)

MOUR/)

PARAMAN AND BARAMA

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The invention relates to immunogenic analogues of multimeric proteins each as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF4) plas) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetahus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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/note= "Tri-glycine linker"
322. .336
/note= "Tetanus toxoid P2 epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 112; DB 6;
Pred. No. 3e-10;
                                                                                                                                                                                                                                                                                                                                                                            Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Human TNF"
159. .161
/note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 23; Page 163-166; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAO30495 standard; protein; 514 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 337 FNNFTVSFWLRVPKVSASHLE 357
                                                                                                                                                                                                                                                                                                                                                                              Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FUNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         162. .318
'note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Scc
100.0%; Protive 0; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human TNFalpha variant, hTNFT_4.
                                                                                                                16-NOV-2001; 2001DK-00001702
16-NOV-2001; 2001US-0331575P
                                                                15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                            Klysner S, Nielsen FS,
                                                                                                                                                                                                                KLYSNER S.
NIELSEN F S.
BRATT T.
VOLDBORG B.
MOURITSEN S.
                                                                                                                                                                                              PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2003-449558/42,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAL61300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
Unidentified.
Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-SEP-2003
                22-MAY-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                 (BRAT/)
(VOLD/)
(MOUR/)
                                                                                                                                                                                              (PHAR-)
(KLYS/)
                                                                                                                                                                                                                                                 (NIEL/)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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             PARAMA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BARAKA BA
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                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to immunogenic analogues of multimeric proteins each as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNP, TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNRalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetamus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                           New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                        Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 6; Length 514;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 112; DB 6; Length 5
Pred. No. 3e-10;
; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    337. .357
/note= "Tetanus toxoid P30 epitope"
358. .514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note= "Tetanus toxoid P2 epitope"
                                                                                                                                                                                   Voldborg B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .161
e= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human TNFalpha variant (TNF_T1) protein.
                                                                                                                                                                                                                                                                                                                                                                                      Claim 23; Page 169-171; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FINITIALITIES 182
                                                                                                                                                                                      Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       358. .514
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note= "Human TNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAO30490 standard; protein; 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 21, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .333
                                                                                                                                                                                Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                159. .1
/note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'note=
PHARMEXA AS.
                          KLYSNER S.
NIELSEN F S.
                                                                                                                             MOURITSEN S
                                                                                                                                                                                                                                   WPI; 2003-449558/42.
                                                                                BRATT T.
VOLDBORG B.
                                                                                                                                                                                                                                                           N-PSDB; AAL61301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 514 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
Unidentified.
Chimeric.
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162

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161

AAO30490;

Key Region Region Region Region Region

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The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TNF, TNFalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TNFalpha variant protein with 3 hTNF sequences joined by glycine linkers and tetahus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CEA; immune response; carcinoembryonic antigen; antígen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New immunogenic analogue of a polymeric protein, useful for preparing composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                     494. .496
hote= "Tri-glycine linker"
497. .517
/note= "Tetanus toxoid P2 epitope"
                                                                                                  Voldborg B,
     .59. .161
'note= "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Truncated human CEA-TT P2 and P30 epitopes.
                                                                                    "Tri-glycine linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 23; Page 175-177; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bratt T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            497 FINFTVSFWLRVPKVSASHLE 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABR82481 standard; protein; 537 AA
                                                    "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
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                                                                                                                                                                                                                                                                                                                                                          16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
                                                                                                                                                                                                                                                                                                                        15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                 .318
                                                                    .321
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Best Local Similarity 100...
Best Local 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S, Nielsen FS,
                                                                                      'note=
                                                    'note=
                                                                                                                                                                                                                                                                                                                                                                                                        (PHAR-) PHARMEXA AS.
(KLYS/) KLYSNER S.
(NIEL/) NIELSEN F S.
(BRAT/) BRATT T.
(VOLD/) VOLDBORG B.
(MOUR/) MOURITSEN S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-449558/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAL61302.
                                                                                                                                                                                                                                                         WO2003042244-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 517 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABR82481;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Klysner
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to immunogenic analogues of multimeric proteins such as immunogenic variants of interleukin 5 (IL5) and tumour necrosis factor alpha (TWP. TNPalpha) and methods for production of immunogenic analogues. The immunogenic analogue is useful for preparing a composition for treating inflammatory diseases, e.g., arthritis. It is also used in gene therapy. The present sequence is human TMPalpha variant protein. The variant comprises 3 hTMF sequences joined by glycine linkers and tetanus toxoid P2 and P30 epitopes. This sequence is used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                         New immunogenic analogue of a polymeric protein, useful for preparing a composition for treating inflammatory diseases e.g. arthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Multimeric protein; interleukin 5; IL5; TNFalpha; inflammatory disease; tumour necrosis factor alpha; gene therapy; arthritis; human; mutant; variant; tetanus toxoid; epitope; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 6; Length 514; 100.0%; Pred. No. 3e-10;
                                                                                                                                                                                                                                                                                                                                                          Bratt T, Voldborg B, Mouritsen S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                               494. .514
/note= "Tetanus toxoid P30 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 23; Page 191-193; 196pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
2. .158
/note= "Human TNF"
337. .493
/note= "Human TNF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAO30492 standard; protein; 517 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human TNFalpha variant protein #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 FINNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        494 FINIFIVSFWLRVPKVSASHLE
                                                                                                                                                     15-NOV-2002; 2002WO-DK000764
                                                                                                                                                                                   16-NOV-2001; 2001DK-00001702.
16-NOV-2001; 2001US-0331575P.
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                                                                                                                                                                                                                                                                                                                                                          Klysner S, Nielsen FS,
                                                                                                                                                                                                                                                       KLYSNER S.
NIELSEN F S.
                                                                                                                                                                                                                                      PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                        2003-449558/42.
                                                                                                                                                                                                                                                                                                                       MOURITSEN S
                                                                                                                                                                                                                                                                                                     VOLDBORG B.
                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAL61305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 514 AA;
                                                                                  WO2003042244-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
Unidentified.
Chimeric.
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                                                                                                                  22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA030492;
                                                                                                                                                                                                                                  (PHAR-) I (KLYS/) I (NIEL/) I (BRAT/) I (VOLD/) I (MOUR/) I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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Best Loc Matches

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Key Region

Synthetic

Peptide Protein

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New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; chimeric; diphtheria neurotoxin; tetanus neurotoxin; TeNT.
                                                                                                                                                                                                                  Cloned DNA sequence coding for tetanus toxin - or its fragments contg. epitope used to express antigens for vaccine prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                            Gene product comprises a tetanus toxin fragment, which may be express in a transformed host, and used as an antigen in vaccine production, against the disease. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a non toxic polypeptide, for delivery of
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                            Length 573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
100.0%; Score 112; DB 1;
Best Local Similarity 100.0%; Pred. No. 3.4e-10;
Matches 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Modified clostridial heavy chain fragment #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE07897 standard; protein; 605 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       205 FNNFTVSFWLRVPKVSASHLE 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; Page 45; 50pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Silman N;
                                                                                                                                                                                                                                                                        Claim 4; Fig 1; 36pp; English.
                 86EP-00305029
                                                      85GB-00016442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-2000; 2000WO-GB004644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-DEC-1999; 99GB-00028530.
07-APR-2000; 2000GB-00008658.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Corynebacterium diphtheriae.
Clostridium tetani.
                                                                                      (WELL ) WELLCOME FOUND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sutton JM,
                                                                                                                                                              WPI; 1987-015999/03.
N-PSDB; AAN70545.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-514643/56.
                                                                                                                                                                                                                                                                                                                                                                                      Sequence 573 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200158936-A2
                                                                                                                           Fairweathe NF;
                 27-JUN-1986;
                                                      28-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-SEP-2003
01-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE07897;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 166
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셤
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCB) in the animal of at least 1 modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a truncated human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Portion of B fragment and all of the C fragment of tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 112; DB 7;
100.0%; Pred. No. 3.1e-10;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 134-137; 140pp; English.
                                                                 1. .34
/note= "signal peptide"
                                                                                                                     /note= "mature protein"
                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAP70345 standard; protein; 573 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                  17-JAN-2002; 2002DK-00000082.
                                                                                                                                                                                                                                 17-JAN-2003; 2003WO-DK000031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (revised)
(first entry)
                                                                                                .537
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                                                                                                                                                                                                                                                                                                                                                             Voldborg
                                                                                                                                                                                                                                                                                                                          (PHAR-) PHARMEXA AS.
                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-587260/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; ACF35968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 537 AA;
                                                                                                                                                          WO2003059379-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in its sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
22-APR-1991
                                                                                                                                                                                                                                                                                                                                                             Klysner S,
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TT; vaccine

AAP70345;

513

8 셤 RESULT 165

AAP70345

21-JAN-1987 EP209281-A.

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17-OCT-2003
23-SEP-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US5780024-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW48909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chimeric.
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Region
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therapeutic agent to a neuronal cell, which comprises a binding domain (archive) that binds to the neuronal cell and a translocation domain (amino terminal half of HG, designated as a translocation domain (amino terminal half of HG, designated as HM), that translocates the therapeutic agent into the neuronal cell, where the translocates the therapeutic domain of a clostridial neurotoxin and is not a fragment or derivative of a HN domain of a clostridial toxin. Polypeptides of the invention are useful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for reat disorders of the CNS including neurodegenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is modified clostridial heavy chain fragment. This sequence is constructed by fusing the truncated binding domain of tetanus neurotoxin (Updated on 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 112; DB 4; Length 605; 100.0%; Pred. No. 3.6e-10; ive 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW48909 standard; protein; 618 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       235 FNNFTVSFWLRVPKVSASHLE 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                51
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(UYMA-) UNIV MARYLAND BALTIMORE.
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/note= "SOD-1"
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Best Local Similarity luv..
Local Similarity luv..
Local Similarity luv..
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Clostridium tetani.
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New hybrid protein of superoxide dismutase and tetanus toxin fragment C - having increased uptake by neurons and retention of enzymatic activity in these cells, for treating neurological diseases associated with oxidative

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The present sequence represents an enzymatically active human copper-zinc superoxide dismutase (SOD-1) fused at its carboxyl terminus with the tetanus toxin fragment C (TTC) moiety. The TTC moiety constitutes amino-acid residues 865-1315 of the tetanus holotoxin. The hybrid protein, referred as SOD:Tet451, is claimed to have the following properties: (a) it exhibits Cu/Zn SOD enzymatic activity; (b) the TTC moiety selectively binds to nerve cells and allows uptake of the hybrid protein into these cells; and (c) it retains substantial SOD enzymatic activity following neurological disporders associated with oxidative stress, e.g. stroke, brain hypoxia-reperfusion, epilepsy, Parkinson's and Huntington's diseases. (Updated on 17-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence represents a fusion protein, comprising a protein used for immunising against shed antigen-specific B cells linked to a fragment of tetanus protein. It is used in vaccines of the invention. The specification describes a method for inducing an immune response reactive with idiotypes present on shed antigen-specific B cells (SAB) of an individual. The method involves administering a vaccine formulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing an immune response against shed antigen-specific B cell idiotypes, by administering a vaccine formulation comprising polynucleotides encoding an idiotypic determinant or peptides comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shed antigen-specific B cell antigen linked to tetanus toxin fragment C.
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                                                                                                                                                                                                                                                                                                                                                                                                                                              250 FNNFTVSFWLRVPKVSASHLE 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB31429 standard; protein; 661 AA
                                Claim 7; Col 23-26; 23pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                          1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          humoral immune response; cancer.
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                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.0
These 21; Conservative
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                                                                                                                                                                                                                                                                                                                 Sequence 618 AA;
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comprising polynucleotide encoding an idiotype of an antibody that binds to an epitope of shed antigen. The method is useful for inducing an immune response reactive with idiotypes present on SAB of an individual. The method is useful for depleting shed antigen-specific B cells, and for treating immune complex-mediated disease progression in organ specific autoimmune disease exacerbated by humoral immune response against groups expressed on shed antigen, or by plasma cell production of antibodies against groups of shed antigen. It is useful in cancer therapy and for treating autoimmune disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (carboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocates the therapeutic agent into the neuronal cell, where the translocation domain is not a HN domain of a clostridial neurotoxin and is not a fragment or derivative of a HN domain of a clostridial neurotoxin and is not a fragment or derivative of useful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful to treat disorders of the CNS including neurodegenerative diseases, stroke, epilepsy, brain tumours
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; chimeric; diphtheria neurotoxin; tetanus neurotoxin; TeNT.
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                                                                                                                                                                                                                                           100.0%; Score 112; DB 4; Length 661; 100.0%; Pred. No. 4e-10;
                                                                                                                                                                                                                                             Score 112,
Pred. No. 4e-10;
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                                                                                                                                                                                                                                                                                  0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE07895 standard; protein; 665 AA.
                                                                                                                                                                                                                                                                                                                                                 293 FNNFTVSFWLRVPKVSASHLE 313
                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Silman N;
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                                                                                                                                                                                                                                                               Local Similarity
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                                                                                                                                                                                                      Sequence 661 AA;
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01-NOV-2001
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Matches
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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells, killing cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory inhibiting and reversing damage to cells, killing cells; promoting or inhibiting and reversing of cells, and treating intracellular infection, for interfering with intracellular cell, for intracellular infection, for interfering with intracellular cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for treating prion disease, Alzheimer' disease and wide range of disorders including muscle spasms such as blephorospasm, torticolis and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
        The present sequence
and infection. They are also useful in gene therapy. The present sequencis modified clostridial heavy chain fragment. This sequence is constructed by fusing the binding domain of tetanus neurotoxin (TeNT) with translocation domain of diphtheria neurotoxin. (Updated on 11-SEP-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; CODD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; Hc; binding domain;
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                                                                                                                                                               Length 665;
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                                                                                                                                                               100.0%; Score 112; DB 4; 100.0%; Pred. No. 4e-10;
                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DipT HN domain-TeNT-Hc fusion construct.
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                                                                                                                                                                                                                                                                                                                                                                                     AAE35689 standard; protein; 665 AA.
                                                                                                                                                                                                                                                                                      295 FINIFIVSFWLRVPKVSASHLE 315
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Corynebacterium diphtheriae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                                                                                                                                             Query Match
Best Local Similarity
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                                                                                                                          Sequence 665 AA;
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hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corymebacterium diphtheriae diphtheria toxin translocation domain (Dip-HN domain) and Clostridium tetani tetanis neurotoxin binding domain (TeNt-HC). This sequence is used in the exemplification of the invention. (Updated on 23-OCT-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells; killing cells; promoting or inhibiting the growth of cells, poptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; COPD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; Hc; binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inhibiting secretion from cells. The invention is also userum interesting Prion disease, Alzheimer' disease and wide range of disorders
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                           ö
                                                                                                                                                                       Length 665;
                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TeNT-Hc-DipT HN domain-thrombin linker fusion construct.
                                                                                                                                                                     9
                                                                                                                                                                                          4e-10;
                                                                                                                                                                       DB
                                                                                                                                                                   Score 112; DE
Pred. No. 4e-1
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 12; Page 52-54; 130pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MICR-) MICROBIOLOGICAL RES AUTHORITY.
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                                                                                                                                                                                                                                                                    FINETVSFWLRVPKVSASHLE 315
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0
                                                                                                                                                                                                                                                                                                                                                                           AAE35690 standard; protein; 677
                                                                                                                                                                                                                                              FINNFTVSFWLRVPKVSASHLE
                                                                                                                                                                       100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-MAY-2001; 2001GB-00012687.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Corynebacterium diphtheriae
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shone CC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-167247/16.
                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tetani
                                                                                                                                  Sequence 665 AA;
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                                                                                                                                                                                                        21;
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                                                                                                                                                                                                                                                                                                                                                                                                                  AAE35690;
                                                                                                                                                                                                                                                                                 295
                                                                                                                                                                       Query Match
                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                          RESULT 171
                                                                                                                                                                                          Best Loc
Matches
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               hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corynebacterium diphtheriae diphtheria toxin translocation domain (Dipf-HN domain, Clostridium tetani tetanis neurotoxin binding domain (TeNT-HC) and thrombin linker peptide. This sequence is used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, preventing and reversing damage to cells, killing cells, promoting or inhibiting the growth of cells, apptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and for inhibiting secretion from cells. The invention is also useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; CODD; Bronchlitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC;
                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                 ö
                                                                                                                                                                                             Length 677;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TeNT-Hc-DipT HN domain-factor Xa linker fusion construct.
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                                                                                                                                                                                           Score 112; DB 6;
Pred. No. 4.1e-10;
muscle spasms such as blephorospasm,
                                                                                                                                                                                                                               Mismatches
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                                                                                                               the exemplification of the invention
                                                                                                                                                                                                                                                                                         307 FINFTVSFWLRVPKVSASHLE 327
                                                                                                                                                                                                                                                                                                                                                                                                       AAE35691 standard; protein; 677 AA
                                                                                                                                                                                                                                                                   21
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                                                                                                                                                                                         100.0%;
                                                                                                                                                                                                                                                                     1 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Corynebacterium diphtheriae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clostridium tetani.
Unidentified.
                                                                                                                                                                                                             Similarity
                                                                                                                                                     Sequence 677 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200296467-A2.
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Best Local Simil
Matches 21; C
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                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE35691;
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Gaps

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Indels

Mismatches

21 ;

Length 693;

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cantigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 E-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at least noe foreign T helper epitopes of the respective PA and including to the treat prostate, prostate, prostate, prostate, prostate, prostate, prostate, prostate or breast cancer when the PA is human PSM, FGF8b and Har2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; PSM; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutant human PSM antigen splice variant construct, hPSM'8.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inducing immune responses to weakly immunogenic, tumor as antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.2e-10;
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/label= P30
/note= "foreign epitope"
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/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLE
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Birk P, Karlsson G;
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98US-0105011P.
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                                                                                                                                                                                                                                                                                                                                       the specification
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Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                  Sequence 693 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
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treating Prion disease, Alzheimer' disease and wide range of disorders including muscle spaems such as blephorospasm, torticolis and hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and aschma. The present sequence is a fusion construct comprising Corynebacterium diphtheriae diphtheria toxin translocation domain (DipT-NM domain, Clostridium tetani tetanis neurotoxin binding the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                  Length 677;
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                                                                                                                                                                                                                                                                                                          Indels
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                                                                                                                                                                                                                                                 Score 112; DB 6;
Pred. No. 4.1e-10;
Mismatches 0;
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|label= P2
|note= "foreign epitope"
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/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                  FUNFTVSFWLRVPKVSASHLE 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY92647 standard; protein; 693 AA.
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                                                                                                                                                                                                                                                             100.0%;
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98US-0105011P.
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                                                                                                                                                                                                                                                                                                          21; Conservative
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                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                               Sequence 677 AA;
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Synthetic.
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Haaning J, Leach

CC AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are confirmed to the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. thuran prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGR8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and (Or at least 18 -cell group derived from the C cell-associated PA, and (2) at least 1 B-cell group derived from the C foreign to the animal. Analogues of human PSM, human Her2 and c predicted CTL and B-cell epitopes of the respective PA and including at correct prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 confit the specification Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer. Prostate specific membrane antigen; splice variant; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope. 100.0%; Score 112; DB 3; Length 693; 100.0%; Pred. No. 4.2e-10; Ative 0; Mismatches 0; Indels Haaning J, Leach D, Mutant murine PSM splice variant construct, mPSM'X. an S, Nielsen KG, Karlsson G; Location/Qualifiers AAY92661 standard; protein; 698 AA. 153 FNNFTVSFWLRVPKVSASHLE 173 1 FNNFTVSFWLRVPKVSASHLE 21 99WO-DK000525. 98DK-00001261. 98US-0105011P. 197. .217 /label= P30 10-AUG-2000 (first entry) 21; Conservative (MEBI-) M & E BIOTECH AS. Mouritsen WPI; 2000-349917/30. Birk P, Best Local Similarity Sequence 693 AA; WO200020027-A2 musculus. 05-OCT-1998; 05-OCT-1999; 20-OCT-1998; 13-APR-2000. Mus musculu Synthetic. Steinaa L, Gautam A, AAY92661; Query Match Peptide RESULT 175 Matches 8\$ ઠે 셤

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AAY92659-62 are mutant immunogenized murine prostate specific membrane antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autocolerance to mouse PSM can be broken in mice by immunisation and/or DNA vaccination against murine PSM cusing murine PSM analogues. Immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. The method is seciated peptide antigens (PA) such as those associated with cancers casociated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human PSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (PGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (PAC8) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the call-associated PA is and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine PGP8b comprising a substantial part of all known and predicted CTL and B-cell epitope are also claimed. The method is used to treat prostate, PESB and prostate/breast or breast cancer when the PA is human PSM, FGP8b and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Prostate specific membrane antigen, splice variant, mutant, vaccination, cytotoxic T-lymphocyte immunity, breast cancer, prostate cancer, cell-associated peptide antigen, foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                       Her2, respectively. Note: This sequence was constructed from the murine PSM splice variant (AAY92624), which appears on pages 210-213 of the
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                Example 1; Page; 220pp; English.
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Birk P, Karlsson G;
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/label= P30
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Best Local Similarity
Matches 21; Conserv
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20-OCT-1998;
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WPI; 2000-349917/30.

Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a nucleic acid encoding the polypeptide, or a microorganism expressing the

polypeptide.

WPI; 2003-587260/55. N-PSDB; ACF35966.

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24-JUL-2003
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AAY92659-62 are mutant immunogenized murine prostate specific membrane antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autocolerance to mouse PSM can be broken in mice by immunisation and/or DNA vaccination against murine PSM using murine PSM analogues. Immunogenic analogues of PSM can be used in the claimed method as an autovoaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cellassociated peptide antigens (PA) such as those associated with cancers (Self-proteins), e.g. human PSM, heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune the PA and/or at least 1 B-cell group derived from the coll-associated PA and (2) at least 1 B-cell group derived from the coll-associated PA and (2) at least 1 B-cell group derived from the fGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper comprising are abstantial part of all known and predicted CTL and B-cell epitope are also claimed. The method is used to treat prostate, prostate, breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the murine constitie, and including an pages 210-213 of the tumor associated peptide Inducing immune responses to weakly immunogenic, tumor as antigens for the treatment of breast and prostate cancer.

100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.3e-10; ive 0; Mismatches 0; 631 FNNFTVSFWLRVPKVSASHLE 651 21 1 FNNFTVSFWLRVPKVSASHLE 21; Conservative Query Match Best Local Similarity Sequence 703 AA;

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Gaps

Modified human CEA-TT P2 and P30 epitopes. ABR82479 standard; protein; 708 (first entry) 20-NOV-2003 CEA; immune Synthetic. ABR82479;

carcinoembryonic antigen; antigen presenting cell; immune response; carcinoembryonic antigen; antigen presenting cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen

1. .34 /note= "signal peptide" .708 -- "mature protein" Location/Qualifiers 35. .70i /note= Key Peptide Protein

WO2003059379-A2

17-JAN-2003; 2003WO-DK000031. 17-JAN-2002; 2002DK-0000082. 17-JAN-2002; 2002US-0350047P.

Voldborg B; (PHAR-) PHARMEXA AS. Klysner S,

. 0 Length 703; 0; Indels Example 1; Page; 220pp; English. specification

ö The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least I modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced ö Length 708; Indels 100.0%; Score 112; DB 7; 100.0%; Pred. No. 4.3e-10; Disclosure; Page 121-124; 140pp; English. 642 FNNFTVSFWLRVPKVSASHLE 662 21 1 FUNFTVSFWLRVPKVSASHLE Conservative Query Match Best Local Similarity Sequence 708 AA; in its sequence 21; Matches 원 à

Modified human CEA-TT P2 and P30 epitopes. Ź ABR82480 standard; protein; 713 (first entry) 20-NOV-2003 ABR82480; RESULT 178 ABR82480

CEA; immune response; carcinoembryonic antigen; antigen presenting cell; APC; cytostatic; vaccine; human; tetanus toxoid; p2; p30; antigen.

Synthetic.

Location/Qualifiers

35. .713 /note= "mature protein" .34
 /note= "signal peptide" 17-JAN-2003; 2003WO-DK000031. WO2003059379-A2. 24-JUL-2003. Key Peptide Protein

17-JAN-2002; 2002DK-00000082. 17-JAN-2002; 2002US-0350047P. œ E Klysner S, Voldborg (PHAR-) PHARMEXA AS

WPI; 2003-587260/55. N-PSDB; ACF35967.

Inducing an immune response in humans against autologous carcinoembryonic antigen (CEA) comprises administering a modified CEA polypeptide, a

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The invention relates to inducing an immune response against autologous carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCS) in the animal of at least 1 modified CEA polypeptide or of a mucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
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 nucleic acid encoding the polypeptide, or a microorganism expressing the
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                                                                                                                                                                                                                                                                                 Length 713;
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                                                                                                                                                                                                                                                                              Score 112; DB 7;
Pred. No. 4.3e-10;
Mismatches 0;
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                                          Disclosure; Page 128-131; 140pp; English.
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/note= "signal peptide"
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2002US-0350047P.
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                                                                                                                                                                                                                                                                                             Local Similarity
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Matches
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The invention relates to inducing an immune response against autologous

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carcinoembryonic antigen (CEA) in an animal, e.g. human. The method involves effecting uptake and processing by antigen presenting cells (APCs) in the animal of at least I modified CEA polypeptide or of a nucleic acid encoding the modified CEA polypeptide or of a microorganism or virus expressing the modified CEA polypeptide to induce a CTL response and an antibody response that targets the autologous CEA. The method is useful in immunizing actively against diseases characterized by cells that express CEA. The present sequence represents a modified human CEA polypeptide that has tetanus toxoid (TT) P2 and P30 epitopes introduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are
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                                                                                                                                                                                                                Length 717;
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100.0%; Pred. No. 4.4e-10;
ive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                       AAY92637 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                          693 FINFTVSFWLRVPKVSASHLE 713
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/note= "foreign
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/label= P2
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                                                                                                                                                                                                              Query Match
Best Local 8
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preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide artigens (PA) such as those associated with cancers (Self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting is simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and (2) at least 1 B-cell group derived from the Cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and chuman/murine PGP8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least tone foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGP8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
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/label= P30
/note= "foreign epitope"
305. .319
/label= P2
/note= "foreign epitope"
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98US-0105011P.
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Best Local Similarity 100.0
Matches 21, Conservative
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                                                                                                                                                                                                                                                                                                                           Sequence 750 AA;
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Synthetic.
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utovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immunogenized forms. The method is used for inducing immunogenized forms. The method is used for inducing antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (FBA), heregulin 2 (Herz) and/or human prostate specific membrane antigen (FBA), heregulin 2 (Herz) and/or cimultaneous presentation by antigen producing cells (APCs) of the simultaneous presentation by antigen producing cells (APCs) of the canimals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the Cell-associated PA, and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, PGF8b and HBP2, respectively. Note: This sequence was constructed of the specifical control of the short file of the short of the wind type human PSM (AAY92619), which appears on pages 184-187 of the
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                                     AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an
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Best Local Similarity 100.0%; Pred. No. 4.6e-10;
Matches 21; Conservative 0; Mismatches 0;
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/label= P2
/note= "foreign epitope"
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/note= "foreign epitope"
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Example 1; Page; 220pp; English.
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98US-0105011P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 750 AA;
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Synthetic.
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RESULT 184
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The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody contained regions and cystaine residues involved in disulfide bonds are binding regions and cystaine residues involved in disulfide bonds are contained method is used for inducing immuno responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/Or at least 1 B-cell group derived from the C cell-associated PA, and (2) at least 1 Eirst T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and channal man and comprising a substantial part of all Known and congrising a substantial part of all Known and congrising a substantial part of all Known and congrising a substantial part of all Known and congrising a substantial part of all known and congrising a congrising a concer when the PA and including at the treat prostate, prostate or breast concer when the PA is human concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and concerns and con
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                                                                        Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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100.0%; Pred. No. 4.6e-10;
ilve 0; Mismatches 0;
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/label= P2
/note= "foreign epitope"
443. .463
/label= P30
/note= "foreign epitope"
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                                                                                                                                 Example 1; Page; 220pp; English.
 Birk P, Karlsson G;
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                                     WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 750 AA;
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 Gautam A,
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antigen (PSM) constructs, which contain foreign epitchies membrane antigen (PSM) constructs, which contain foreign epitches (P2 and/or P30).

The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGF8D). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the orimals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 Eirst T helper cell group which is coreign to the animal. Analogues of human PSM human Her2 and human/murine FGF8D comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at the ast one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is and SM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                              Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                    Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                  AAY92627-49 are mutant immunogenized human prostate specific membrane
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/label= P30
/note= "foreign epitope"
606. .620
/label= P2
                                                                                                                                 Nielsen KG,
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                                                                                                                               Mouritsen S, Nielse
Birk P, Karlsson G;
98DK-00001261.
98US-0105011P.
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Best Local Similarity
Local 21; Conservative
The 21; Conservative
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Synthetic.
05-OCT-1998;
20-OCT-1998;
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Gautam A,
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Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                      Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                               10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                      Local Similarity 100.
es 21; Conservative
                                                                      (MEBI-) M & E BIOTECH AS.
                                                                                                     WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                    Sequence 750 AA;
             WO200020027-A2.
                                      35-OCT-1999;
                                                   05-OCT-1998;
                                                         20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Synthetic.
                         13-APR-2000
                                                                                Steinaa L,
                                                                                        Gautam A,
                                                                                                                                                                                                                                                                                                                Query Match
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Matches
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Affiliation (PSM) constructs, which contain foreign epitopes (P2 and/or P30).

The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are conserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with canners (Self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animals immune system of: (1) at least 1 CTL (cytocoxic T-lymphocyte) cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and chuman/murine FGF8b comprising a subscential part of all known and chuman/murine FGF8b comprising a subscential part of all known and cheat prostate, prostate/breast or breast cancer when the PA is human CC FSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the analogues of the annex of pages region or preset the analogues of the sequence was constructed than analogues of the sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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100.0%; Pred. No. 4.6e-10;
iive 0; Mismatches 0;
                                                                                                        'note= "foreign epitope"
                                                                                                                                                                          /note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nielsen KG,
                                       Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                        99WO-DK000525.
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                                                                                                                              32. .52
/label= P30
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Best Local Similarity 100...
Local Similarity 100...
                                                                                 /label= P2
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                                                                                                                                                                                                                         WO200020027-A2
                                                                                                                                                                                                                                                                                                                        05-OCT-1999;
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20-0CT-1998;
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                                                                                                                                Peptide
                                                        Peptide
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              EXEXEXE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY92627-49 are mutant immunogenized human prostate specific membrane antiquen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 kGPBb). The method comprises effecting simulates presentation by antigen producing cells (APCB) of the animals immune system of: (1) at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the CC animals. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human pcomprised. From the PA is human PSM (AAY92619), which appears on pages 184-187 cell from the specification
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/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                           Mouritsen S, Niels
Birk P, Karlsson G;
                                                                                                                                             99WO-DK000525.
                                                                                                                                                                                                                       98US-0105011P.
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Dalum

Leach D,

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Gaps

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Indels

Length 750;

Mutant human prostate specific membrane antigen construct, hPSM1.8.

10-AUG-2000

AAY92632;

Mutant human prostate specific membrane antigen construct, hPSM3.1.

(first entry)

10-AUG-2000

AAY92638;

AAY92638 standard; protein; 750 AA.

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AXY AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize and cyses of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled by the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APC8) of the animal. Analogues of human PSM, human Her2 and comprised from the CC cell-associated PA; and (2) at least 1 B-cell group derived from the CC cell-associated PA; and (2) at least 1 B-cell group which is corein to the animal. Analogues of the respective PA and including at the predicted CTL and B-cell epitopes of the respective PA and including at the predicted CTL and B-cell epitopes of the respective PA and including at the bundan Murrine FGP8b comprising a substantial part of all known and conference of the per epitope are also claimed. The method is used to treat prostate, prostate, breast cancer when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the breast properse or pages 184-187.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Haaning J, Leach D, Dalum I;
                      Prostate specific membrane antigen; immunogenized construct; mutant;
                                     vaccination, cytotoxic T-lymphocyte immunity, breast cancer, prostate cancer, cell-associated peptide antigen, foreign epitope.
                                                                                                                                                                                                                                                  507. .627
|label= P30
|note= "foreign epitope"
                                                                                                                                                                                      4. .38
|Tabel= P2
|note= "foreign epitope"
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                                                                                                                                                                    ocation/Qualifiers
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Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-DK000525.
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                                                                                                        Homo sapiens
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                                                                                                                            Synthetic
                                                                                                                                                                                      Peptide
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Gaps
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  Length 750;
                              Indels
  100.0%; Score 112; DB 3;
100.0%; Pred. No. 4.6e-10;
ive 0; Mismatches 0;
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                                                         FINIFTVSFWLRVPKVSASHLE
Query Match
Best Local Similarity 100.0
Matches 21; Conservative
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RESULT 187 AAY92638

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSW) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. numan prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8b (FGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the canimals immune system of: (1) at least 1 Ctl (cytocoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is construction of the parantal producing cells for the parantal producing cell group which is construction to the animal Analogues of human PSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, human HSM, h
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                                                                                                                                                                                                  Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
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                                                                                                                                                                                                                                                                                                                                                                                                          21. .41
/label= P30
/note= "foreign epitope"
213. .227
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/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
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Best Local Similarity 100.
Matches 21; Conservative
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                                                                                                                                                                                                                                                                                                                              Synthetic.
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated poptide artifices (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 B-cell group derived from the Call-associated PA, and (2) at least 1 E.cell group derived from the cell-associated PA, and (2) at least 1 E.cell group which is foreign to the animal. Analogues of human PSM, human Her2 and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human CPSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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/label= P30
/note="foreign epitope"
674. .688
/label= P2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        location/Qualifiers
                                                                                                                                                                                                                                        AAY92630 standard; protein; 750 AA.
       21
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Birk P, Karlsson G;
1 FINIFIVSFWLRVPKVSASHLE
                                          21 FNNFTVSFWLRVPKVSASHLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-OCT-1999;
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Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                        AAY92630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                RESULT 188
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (BSM) constructs, which contain foreign epitopes (P2 and/or P30). The fimunogenic analogues of PSM can be used in the calained method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGFBD). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) crossing derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA, and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                         Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                          Mutant human prostate specific membrane antigen construct, hPSM1.10.
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                                              Length 750;
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                                                                                Indels
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                                            100.0%; Score 112; DB 3; 100.0%; Pred. No. 4.6e-10;
                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              673. .693
/label= P30
/note= "foreign epitope"
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/label= P2
/note= "foreign epitope"
673. 693
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                            AAY92633 standard; protein; 750 AA
                                                                                                               21
                                                                                                                                21 FINFTVSFWLRVPKVSASHLE 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Page; 220pp; English.
                                                                                                             1 FINIFIVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gautam A, Birk P, Karlsson G;
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                                                                                                                                                                                                                                                                                           (first entry)
                                       Query Match
Best Local Similarity 100.0
Matches 21, Conservative
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               Sequence 750 AA;
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20-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic,
                                                                                                                                                                                                                                                           AAY92633;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
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AAY92627-49 are mutant immunogenized human prostate specific membrane
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20-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
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                                                                                                                                                                                                                                                                                                         RESULT 191
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
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human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epicopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dalum I;
                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                          Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                   Mutant human prostate specific membrane antigen construct, hPSM10.3.
                                                                                                                                                                                                                                                                                                                                                      vaccination; cytotoxic T-lymphocyte immunity; breast cancer;
prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                            ö
                                                                                                                      Length 750;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Leach D,
                                                                                                                                            0; Indels
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                                                                                                                    Score 112; DB 3;
Pred. No. 4.6e-10;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                  210. .230
/label= P30
/note= "foreign epitope"
674. .688
/label= P2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                        ocation/Qualifiers
                                                                                                                                                                                                                                               AAY92646 standard; protein; 750 AA
                                                                                                                                                                              673 FNNFTVSFWLRVPKVSASHLE 693
                                                                                                                                                                 1 FNNFTVSFWLRVPKVSASHLE 21
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1 Similarity 100.0%; P:
21; Conservative 0;
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Birk P, Karlsson G;
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                                                                                                                                 Local Similarity
                                                                                               Sequence 750 AA;
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Gautam A, 1
                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                      AAY92646;
                                                                                                                     Query Match
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human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting elimultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (Cyctoxic T-1ymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to traat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2. respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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prostate cancer; cell-associated peptide antigen; foreign epitope.
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/note= "foreign epitope"
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Best Local Similarity 100.
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contigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30).

The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or contributed growth factors Bb (FGPBb). The method comprises effecting simultaneous presentation by antigen producing cells (ApCB) of the animals immune system of: (1) at least 1 CTL (Cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA, and (2) at least 1 Eirst 7 helper cell group which is consign to the animal. Analogues of human PSM, human Herz and predicted CTL and B-cell epitopes of the respective A and including at predicted CTL and B-cell epitopes of the respective PA and including at class to foreign to reat prostate, prostate/breast or breast cancer when the PA is human PSM, FSM, FSBB and HBrz, respectivelly. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prostate specific membrane antigen; immunogenized construct; mutant;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21. .41
/label= P30
/note="foreign epitope"
606. .620
/label= P2
/note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 FINFTVSFWLRVPKVSASHLE
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98US-0105011P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 750 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200020027-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY92629;
                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
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     원
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WPI; 2000-349917/30.

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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize antigen of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immuno erisponses against weakly immunogeniz cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simulateneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 and sold group which is growing derived from the PA and/or at least 1 and layoup derived from the PA and/or at least 1 and layoup derived from the PA and/or at least 1 and layoup derived from the PA and/or at least 1 and layoup derived from the PA and or all associated PA; and (2) at least 1 and and and including at credited CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to the animal type human PSM, which appears on pages 184-187 cell the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutant human prostate specific membrane antigen construct, hPSM1.5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 750;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301. .321
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24. .38
/label= P2
/note= "foreign epitope"
301. .321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY92636 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21 FNNFTVSFWLRVPKVSASHLE 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE 21
                                                                 Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98DX-00001261.
98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-DK000525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 750 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200020027-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-AUG-2000
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20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY92636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
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Dalum I;

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21. .41
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                AAY92642 standard; protein; 750 AA.
                                                                                                                                                                                  Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                  10-AUG-2000 (first entry)
                                                                                                                                                                           21; Conservative
    (MEBI-) M & E BIOTECH AS.
            Mouritsen S,
                         WPI; 2000-349917/30.
                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                         Sequence 750 AA;
                                                                                                                                                                                                                                                                                                       WO200020027-A2
                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                13-APR-2000
            Steinaa L,
                                                                                                                                                                                                                                                                         Synthetic.
                 Gautam A,
                                                                                                                                                                                                                          AAY92642;
                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                         RESULT 194
                                                                                                                                                                           Matches
                                                                                                                                                                                                              AAY92642
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize antigones of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are controlled by the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. antigens (PA) such as those associated with cancers (self-proteins), e.g. thuman prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 8D (PGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the simula system of: (1) at least 1 CTL (cytcoxof T-1ymphocyte) croll-associated PA, and (2) at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the CT coll-associated PA, and (2) at least 1 B-cell group derived from the CT coll-associated PA, and (2) at least 1 B-cell group which is contained. The method of a used contained of the respective PA and including at contained crostate, prostate prostate also claimed. The method is used to the wild type human PSM (AAY92619), which appears on pages 184-187
                                                                                                                                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mutant human prostate specific membrane antigen construct, hPSM6.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 112; DB 3; Length 750; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Indels (
                                                                                                                                                                                            Leach D,
                                                                                                                                                                                            Haaning J,
                                                                                                                                                                                            Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY92644 standard; protein; 750 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21 FNNFTVSFWLRVPKVSASHLE 41
                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page; 220pp; English.
                                                                                                                                                                                         Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
99WO-DK000525
                                                      98DK-00001261.
                                                                                98US-0105011P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .0-AUG-2000 (first entry)
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                                                                                                                                   (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of the specification
                                                                                                                                                                                                                                                                          WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 750 AA;
  05-OCT-1999;
                                                      05-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
Synthetic.
                                                                                20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY92644;
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Best Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY92644
     à
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The Immunogenic analogues of the response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are binding regions and cysteine residues involved in disulfide bonds are controlled immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. muan prostate specific membrane antigen (PSM), heregulin 2 (Herz) and/or fibroblast growth factor 80 (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B real group derived from the cell-associated PA, and (2) at least 1 Brown human Herz and consprising a substantial part of all known and preciped CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, RGF8b and Herz, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 cof the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                 AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an
                                                                                Haaning J, Leach D, Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prostate specific membrane antigen; immunogenized construct; mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mutant human prostate specific membrane antigen construct, hPSM0.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vaccination; cytotoxic T-lymphocyte immunity; breast cancer;
prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 750;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 112; DB 3;
100.0%; Pred. No. 4.6e-10;
ive 0; Mismatches 0;
                                                                             Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .ocation/Qualifiers
                                                                                                      Birk P, Karlsson G;
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Gaps

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210. .230 /label= P30 /note= "foreign epitope" 448. .462

Peptide

Peptide

Location/Qualifiers

Synthetic.

Dalum I;

Leach D,

Haaning J,

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Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
/label= P2
/note= "foreign epitope"
                                                                                                                   Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92659 standard; protein; 756 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                              1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                 Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                  Example 1; Page; 220pp; English.
                                                          99WO-DK000525.
                                                                         98DK-00001261
                                                                                 98US-0105011P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 21, Conservative
                                                                                                                                          WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                              Seguence 750 AA;
                        WO200020027-A2
                                                        05-OCT-1999;
                                                                        05-OCT-1998;
                                                                                 20-0CT-1998;
                                         13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY92659
XX
AC AAY9
XX
DT 10-A
XX
KW Pros
KW Pros
KW Pros
KW Pros
KW Pros
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AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenize all and a care antibody as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are confirmed in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. antigens (PA) such as those associated with cancers (self-proteins), e.g. than intostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGP8D). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animal famune system of: (1) at least 18—cell group derived from the Co-call-associated PA, and (2) at least 18—cell group which is coll-associated PA, and (2) at least 18—cell group which is comparable to the animal. Analogues of human PSM, human Her2 and channel correct on the animal. Analogues of the respective PA and including at predicted CTL and B-cell epitopes of the respective PA and including at the treat prostate, prostate/Phreast or breast cancer when the PA is human PSM FRTRA and HAL2 respectively. Where THE PA is human PSM FRTRA and HAL2 respectively.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to treat prostate, prostate/breast or breast cancer when the PA is humar PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification
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                                  Gaps
                                      ó
100.0%; Score 112; DB 3; Length 750; 100.0%; Pred. No. 4.6e-10; ive 0; Mismatches 0; Indels (
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260 FINFTVSFWLRVPKVSASHLE 280

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Mutant murine prostate specific membrane antigen construct, mPSMX.

Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.

Mus musculus,

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AAYYZASY-62 are mutant Immunogenized mutine prostace specific whembrane antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autotolerance to mouse PSM can be observed to mine by immunisation and/or DNA vaccination against mutine PSM cusing mutine. PSM analogues: Immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cellcassociated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human PSM, heregulin 2 (Herz) and/or fibroblast crowth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 Ercell group derived from the cell-associated particle and or at least 1 B-cell group derived from the cell-associated particle and a substantial part of all known and predicted CTL and B-cell comprising a substantial part of all known and predicted CTL and B-cell ceptopes of the respective PA and including at least one foreign T helper ceptopes are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wild
                                                                                                                                                                                                                                                                                                                                                                                                           Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY92659-62 are mutant immunogenized murine prostate specific membrane
                                                                                                                                                                                                                                                                                                                         Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Her2, respectively. Note: This sequence was constructed from the v
type murine PSM (AAY92623), which appears on pages 204-206 of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mutant murine prostate specific membrane antigen construct, mPSMY.
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                                                                                                                                                                                                                                                                                                                     Haaning J, Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 756;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 112; DB 3;
100.0%; Pred. No. 4.6e-10;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                     Nielsen KG,
                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY92660 standard; protein; 761 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; Page; 220pp; English.
                                                                                                                                                                                                                                                                                                                 Steinaa L, Mouritsen S, Niels
Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                      99WO-DK000525.
                                                                                                                                                                                                                       98DK-00001261.
                                                        255. .275
/label= P30
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                                                                                                                                                                                                                                                                              (MEBI-) M & E BIOTECH AS.
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                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-349917/30.
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                                                                                                         WO200020027-A2
                                                                                                                                                                                                                       05-OCT-1998;
                                                                                                                                                                                    05-OCT-1999;
                                                                                                                                                                                                                                             20-OCT-1998;
                                                                                                                                               13-APR-2000.
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                                   Key
Peptide
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Matches
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AAY92659-62 are mutant immunogenized murine prostate specific membrane antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autocolerance to mouse PSM can be broken in mice by immunisation and/or DNA vaccination against murine PSM using murine PSM analogues. Immunogenic analogues of PSM can be used in the claimed method as an autovoaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-protein), e.g. human PSM, heregulin 2 (Hex2) and/or fibroblast growth factor 8b (FGF8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune cyperentation by antigen producing cells (APCs) of the animals immune the PA and/or at least 1 B-cell group derived from the cell-associated PA control Analogues of human PSM, human Herz and human/murine FGR8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper cell comprishing are also claimed. The method is used to treat prostate, prostate, prostate, breast cancer when the PA is human PSM, FGF8b and Herz, respectively. Note: This sequence was constructed from the wind raper fields.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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prostate cancer; cell-associated peptide antigen; foreign epitope.
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100.0%; Pred. No. 4.7e-10;
ive 0; Mismatches 0;
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                                                                                                                                                          Location/Qualifiers
689. .709
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Birk P, Karlsson G;
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98US-0105011P.
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                                                                 musculus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gautam A,
                                                                                                Synthetic
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Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                     infection; Prion disease, Alzheimer' disease; hypersecretion disorder; muscle spasm; CODD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeMT; translocation domain; HN domain; DipT; Hc; binding domain; HN domain; DipT; Hc;
            Apoptosis; therapy; inflammatory mediator; intracellular trafficking;
                                                                                                                                                                                                                                                                                                                                                                       Example 12; Page 114-117; 130pp; English.
                                                                                                                                                                                                                                                     (MICR-) MICROBIOLOGICAL RES AUTHORITY
                                                                                                                                                                                                        21-MAY-2002; 2002WO-GB002384
                                                                                                                                                                                                                               24-MAY-2001; 2001GB-00012687
                                                                                        Corynebacterium diphtheriae
                                                                                                  Clostridium tetani.
Salmonella typhimurium.
Unidentified.
                                                                                                                                                                                                                                                                             Shone CC;
                                                                                                                                                                                                                                                                                                  WPI; 2003-167247/16.
                                                                                                                                                           WO200296467-A2
                                                                                                                                                                                 05-DEC-2002.
                                                                                                                                                                                                                                                                             Sutton JM,
                                                                                                                                      Chimeric
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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, promoting or preventing and reversing damage to cells; killing cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular confiction and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular cell, for intracellular infection, for interfering with intracellular infection, for interfering with intracellular infection, for interfering with intracellular cells. The invention is also useful for inhibiting secretion from cells. The invention is also useful for treating Prion disease, Alzheimer disease and wide range of disorders including muscle spasms such as blephorospasm, torticolis and disorders including muscle spasms such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct of an expension of cells of the constructive pulmonary dispensed comparising Corpusabeterium disphtheriae diphtheriae confirmation of the constructive pulmonary dispensed comparisons. domain (DipT-HW domain), Clostridium tetami tetamus neurotoxin binding domain (TeNT-Hc), thrombin linker peptide and Salmonella typhimurium Spic protein. This sequence is used in the exemplification of the invention

Gaps ö 100.0%; Score 112; DB 6; Length 810; 100.0%; Pred. No. 5e-10; ive 0; Mismatches 0; Indels (AAE35715 standard; protein; 810 AA. 440 FNNFTVSFWLRVPKVSASHLE 460 1 FNNFTVSFWLRVPKVSASHLE 21 (first entry) 21; Conservative Best Local Similarity Sequence 810 AA; 17-JUN-2003 AAE35715; Query Match RESULT 199 Matches AAE3571 ઠે XXXX

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Immune response; immunoglobulin; Ig; tetanus toxin.

Unidentified

Tetanus toxin protein, SEQ ID 25.

(first entry)

17-JUN-2004

ADL90085;

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Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                        Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spasm; COPD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC; binding domain; SpiC protein.
TeNT-Hc-DipT HN domain-factor Xa linker-SpiC protein fusion construct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 12; Page 117-120; 130pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-MAY-2002; 2002WO-GB002384.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-MAY-2001; 2001GB-00012687
                                                                                                                                                                                                                                                                                                                                         Corynebacterium diphtheriae
                                                                                                                                                                                                                                                                                                                                                                                                      Salmonella typhimurium. Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sutton JM, Shone CC;
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                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-DEC-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric
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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a carget call. Pharamaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating intracellular cells, for intracellular infection, for interfering with intracellular cells, for intracellular infection, for interfering with intracellular cells, for intracellular infection, for interfering with intracellular cells, for interfering with intracellular cells, for interfering with intracellular cells, for interfering with intracellular cells, individual infection, for special or special for inhibiting secretion from cells. The invention is also useful for cell-ding muscle spasms such as blephorospasm, torticolls and hypersecretion disorders such as blephorospasm, torticolls and hypersecretion disorders such as blephorospasm, torticolls and comprising corynebacterium diphtheriae diphtheria toxin translocation domain (DipT-HW domain), Clostridium tetani tetanus neurotoxin binding comprision comprision of the exemplification of the nvention

Sequence 810 AA;

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Gaps
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0
            DB 6; Length 810;
                                        Indels
100.0%; Score 112; DB 6; 1
100.0%; Pred: No. Se-10;
Mismatches 0;
      Query Match
Best Local Similarity 100.
Matches 21; Conservative
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ADL90085 standard; protein; 875 AA.
                ADL90085
RESULT
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Generating an immune response to an antigen, useful for generating desired T cell responses comprises administering an immunoglobulin having one peptide epitope of the antigen attached to the immunoglobulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to a method for generating an immune response to an antigen in a patient. The method comprises administering to the patient an immunoglobulin (Ig) or its portion where the Ig has at least one peptide epitope of the antigen attached to the Ig or its portion and administering the immunoglobulin or its portion in conjunction with a RNA segment. The present sequence is an antigen sequence, used to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 875;
                                                                                                                                                                                                                                                                                                          Phillips B;
                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Fig 1J; 154pp; English.
                                                                                                                                                                                                                                20-SEP-2002; 2002US-0412219P.
14-MAR-2003; 2003WO-US007995.
                                                                                                                                                                                                     18-SEP-2003; 2003WO-US030188
                                                                                                                                                                                                                                                                                                          Bot A, Wang L, Smith D,
                                                                                                                                                                                                                                                                                                                                   WPI; 2004-295415/27.
                                                                                                                                                                                                                                                                            (ASTR-) ASTRAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 875 AA;
                                                                                                                                            WO2004027049-A2
                                                                                                                                                                         01-APR-2004
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Indels . 0 100.0%; Score 112; DB 8; 100.0%; Pred. No. 5.5e-10; ive 0; Mismatches 0; 21 100.0%; FI 1 FUNFTVSFWLRVPKVSASHLE Query Match Best Local Similarity 100.0 Matches 21; Conservative ð g

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Gaps

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Modified clostridial heavy chain-superoxide dismutase conjugate #1. AAE07889 standard; protein; 882 AA. 507 FNNFTVSFWLRVPKVSASHLE 527 (first entry) 01-NOV-2001 AAE07889; RESULT 201 AAE07889

Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; chimeric; superoxide dismutase; SOD; diphtheria neurotoxin; tetanus neurotoxin; TeNT.

Corynebacterium diphtherlae. Clostridium tetani. WO200158936-A2. Synthetic Chimeric

Geobacillus stearothermophilus.

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The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (carboxy terminal half of heavy chain (H) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocation domain is not a HN domain of a clostridial toxin. Polypeptides of the invention are a HN domain of a clostridial toxin. Polypeptides of the invention are a HN domain of a clostridial toxin. Polypeptides of the invention are cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for delivering therapeutic colls. They are also useful in gene therapy. The present sequence of m modified clostridial heavy chain-superoxide dismutase conjugate. This conjugate comprises a mitochondrial leader sequence from human Mn-superoxide dismutase (MnSOD), MnSOD from Bacillus stearothermophilus, conjugate and eleaved by factor Xa, translocation domain from a confinent and a neuronal cell-specific binding domain from
                                                                                                                                                                                                                                                                                                                                New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TeNT-Hc-DipT HN domain-factor Xa linker-YopT protein fusion construct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Apoptosis, therapy, inflammatory mediator; intracellular trafficking; infection, Prion disease, Alzheimer' disease; hypersecretion disorder; muscle spasm, CODD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC; binding domain; targetted effector protien; YopT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 4; Length 907; 100.0%; Pred. No. 5.7e-10; Live 0; Mismatches 0; Indels
                                                                                                                                                                                 (MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE35712 standard; protein; 999 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               537 FINFTVSFWLRVPKVSASHLE 557
                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 9; Page 41; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                     Silman N;
                                                     04-DEC-2000; 2000WO-GB004644.
                                                                                                         99GB-00028530
                                                                                                                                 07-APR-2000; 2000GB-00008658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Corynebacterium diphtheriae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-JUN-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tetanus neurotoxin (TeNT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21; Conservative
                                                                                                                                                                                                                                     Sutton JM,
                                                                                                                                                                                                                                                                                     WPI; 2001-514643/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium tetani.
Yersinia pestis.
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 907 AA;
                                                                                                         02-DEC-1999;
  16-AUG-2001
                                                                                                                                                                                                                                     Shone CC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE35712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAE35712
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (acarboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocates the therapeutic agent into the neuronal cell, where the translocation domain is not a HN domain of a clostridial neurotoxin and is not a fragment or derivative of a HN domain of a clostridial toxin. Polypeptides of the invention are cusful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for the invention are constituting neurodegenerative diseases, stroke, epilepsy, brain tumours constituding neurodegenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is modified clostridial heavy chain-euperoxide dismutase conjugate. This conjugate comprises bacterial Mn-superoxide dismutase (MnSOD), from Bacillus stearothermophilus, linker that can be cleaved by thrombin, translocation domain from diphtherial neurotoxin and a neuronal cell-
                                                                                                                                                                                                                                                                                                                                New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; chimeric; superoxide dismutase; SOD; diphtheria neurotoxin; tetanus neurotoxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified clostridial heavy chain-superoxide dismutase conjugate #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 882;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 112; DB 4;
100.0%; Pred. No. 5.5e-10;
tive 0; Mismatches 0;
                                                                                                                                                                            (MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE07891 standard; protein; 907 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               512 FNNFTVSFWLRVPKVSASHLE 532
                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 9; Page 39; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Geobacillus stearothermophilus.
Corynebacterium diphtheriae.
                                                04-DEC-2000; 2000WO-GB004644.
                                                                                                   02-DEC-1999; 99GB-00028530.
07-APR-2000; 2000GB-00008658.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21; Conservative
                                                                                                                                                                                                                                  Sutton JM,
                                                                                                                                                                                                                                                                                   WPI; 2001-514643/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 882 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200158936-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human; TeNT.
16-AUG-2001.
                                                                                                                                                                                                                             Shone CC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAE07891;
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Best Local {
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RESULT 202 AAE07891

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Gaps

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypersecretion disorders such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corymbacterium diphtheriae diphtheria toxin translocation domain (DipT-HN domain), Clostridium teranni tetanus neurotoxin binding domain (TeNT-HC), factor Xa linker peptide and Yersinia pestis targetted effector protien YopT. This sequence is used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells; preventing and reversing damage to cells; killing cells; promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory infection and regulating nitric oxide release from cells; promoting or infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell-surface markers and trafficking, for modulating expression of cell-surface markers and trafficking secretion from cells. The invention is also useful for intraction from cells. The invention is also useful for intraction from cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     inhibiting secretion from cells. The invention is also useful for treating Prion disease, Alzheimer' disease and wide range of disorders including muscle spaems such as blephorospasm, torticolis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; botulinum neurotoxin; tetanus neurotoxin; TeNT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C. botulinum C2 translocation domain with TeNT binding domain #2.
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                                                                                                                                                                                                                                                                                                                                                                               Example 12; Page 106-110; 130pp; English.
                                                                                                                                                                (MICR-) MICROBIOLOGICAL RES AUTHORITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAE07903 standard; protein; 1052 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         629 FNNFTVSFWLRVPKVSASHLE 649
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                                                                                 21-MAY-2002; 2002WO-GB002384.
                                                                                                                           24-MAY-2001; 2001GB-00012687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                            Shone CC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridium botulinum.
Clostridium tetani.
                                                                                                                                                                                                                                                      WPI; 2003-167247/16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 999 AA;
  WO200296467-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the invention
                                         05-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21;
                                                                                                                                                                                                               Sutton JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-AUG-2001
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В
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The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (carboxy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocation domain is not a the neuronal cell, where the translocation domain is not a HN domain of a clostridial toxin. Polypeptides of the invention are useful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for delivering therapeutic culls. The pulypeptide constructs are useful for the treatment of a disease state associated with neuronal cells. They are useful to treat disorders of the CS including neurodespenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is construct.
                                                                                                                                                                                                      New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Neuronal cell; binding domain; translocation domain; stroke; epilepsy; tumour; infection; neurodegenerative disease; gene therapy; botulinum neurotoxin; tetanus neurotoxin; TeNT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C. botulinum C2 translocation domain with TeNT binding domain #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 112; DB 4; Length 1052; 100.0%; Pred. No. 6.8e-10; 1ve 0; Mismatches 0; Indels 0.
                                                                                                    (MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAE07902 standard; protein; 1112 AA.
                                                                                                                                                                                                                                                                             Example 2; Page 50; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        682 FNNFTVSFWLRVPKVSASHLE 702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                          Silman N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 FUNFTVSFWLRVPKVSASHLE
                04-DEC-2000; 2000WO-GB004644.
                                               02-DEC-1999; 99GB-00028530.
07-APR-2000; 2000GB-00008658.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-DEC-2000; 2000WO-GB004644.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-DEC-1999; 99GB-00028530.
07-APR-2000; 2000GB-00008658.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100...
Conservative
11, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-2001 (first entry)
                                                                                                                                      Sutton JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridium botulinum.
                                                                                                                                                                         WPI; 2001-514643/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1052 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200158936-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-AUG-2001.
                                                                                                                                    Shone CC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               invention
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AAE07902
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(MICR-) MICROBIOLOGICAL RES AUTHORITY

Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.

WPI; 2003-167247/16.

Example 12; Page 92-96; 130pp; English

Silman N;

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The invention relates to a non toxic polypeptide, for delivery of a therapeutic agent to a neuronal cell, which comprises a binding domain (acrowy terminal half of heavy chain (HC) of a neurotoxin, designated as HC) that binds to the neuronal cell and a translocation domain (amino terminal half of HC, designated as HN), that translocates the therapeutic agent into the neuronal cell, where the translocation domain is not a HN domain of a clostridial toxin. Polypeptides of the invention are a HN domain of a clostridial toxin. Polypeptides of the invention are caseful for the treatment of a disease state associated with neuronal cells. The polypeptide constructs are useful for delivering therapeutic substances to neuronal cells. They are useful for treat disorders of the CC is including neurodegenerative diseases, stroke, epilepsy, brain tumours and infection. They are also useful in gene therapy. The present sequence is C. botulinum C2 enterotoxin translocation domain with tetanus
                                                                        New non toxic polypeptide for delivery of a therapeutic agent for the treatment of a CNS disorder comprising a binding domain that translocates the therapeutic agent into the neuronal cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 112; DB 4;
100.0%; Pred. No. 7.2e-10;
ive 0; Mismatches 0;
                                                                                                                                      Example 2; Page 49; 50pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Salmonella typhimurium.
Unidentified.
              Sutton JM,
                                            WPI; 2001-514643/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1112 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
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               Shone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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Sequence 1212 AA;

Gaps ; 0

21

Length 1112; Indels

The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a cargier that targets the effector protein to a carget cell. Pharmaceutical composition of the invention is useful for a treatment selected from promoting or inhibiting survival of cells, promoting or inhibiting the growth of cells, apoptosis, release of an inflammatory mediator from cells, division of cells and treating intracellular infection and regulating nitric oxide release from cells. The invention is useful in the manufacture of a medicament for treating a neuronal cell, for intracellular infection, for interfering with intracellular trafficking, for modulating expression of cell surface markers and for inhibiting secretion from cells. The invention is also useful for treating prion disease, Alzheimer, disease and wide range of disorders including muscle spasms such as chronic obstructive pulmonary disease (COPD), bronchitis and asthma. The present sequence is a fusion construct comprising Corynebacterium diphtheriae diphtheria toxin translocation domain (Dipf-HN domain), Clostridium tetanic tetanus neurotoxin binding domain (TeNT-HC), factor Xa linker peptide and Salmonella typhimurium truncated invasion gene D protein, SigD. This sequence is used in the exemplification of the invention

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Apoptosis, therapy, inflammatory mediator, intracellular trafficking, infection; Prion disease, Alzheimer' disease, hypersecretion disorder; muscle spaem; COPD; bronchitis, chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeNT; translocation domain; HN domain; DipT; HC; binding domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FeNT-Hc-DipT HN domain-factor Xa linker-SigD protein fusion construct.
                                                                                                                                                                                                                                        AAE35709 standard; protein; 1212 AA.
742 FNNFTVSFWLRVPKVSASHLE 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Corynebacterium diphtheriae.
                                                                                                                                                                                                                                                                                                                                                                                                                      17-JUN-2003 (first entry)
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(MICR-) MICROBIOLOGICAL RES AUTHORITY.

Sutton JM, Shone CC;

24-MAY-2001; 2001GB-00012687. 21-MAY-2002; 2002WO-GB002384

WO200296467-A2. 05-DEC-2002.

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                                                                                                                                                                                                                                                                                                           Apoptosis; therapy; inflammatory mediator; intracellular trafficking; infection; Prion disease; Alzheimer' disease; hypersecretion disorder; muscle spaem; OCDD; bronchitis; chronic obstructive pulmonary disease; torticolis; blephorospasm; asthma; fusion protein; tetanus neurotoxin; diphtheria toxin; TeMT; translocation domain; HN domain; DipT; Hc; binding domain; invasion gene D protein; SigD protein.
                                             Gaps
                                                                                                                                                                                                                                                                               TeNT-Hc-DipT HN domain-thrombin linker-SigD protein fusion construct.
                                              ó
            Query Match 100.0%; Score 112; DB 6; Length 1212; Best Local Similarity 100.0%; Pred. No. 8e-10; Matches 21; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                   AAE35708 standard; protein; 1212 AA.
                                                                            21
                                                                          1 FNNFTVSFWLRVPKVSASHLE
                                                                                             842 FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-MAY-2002; 2002WO-GB002384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-MAY-2001; 2001GB-00012687
                                                                                                                                                                                                                                                                                                                                                                                                                       Corynebacterium diphtheriae
                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Clostridium tetani.
Salmonella typhimurium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200296467-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unidentified
                                                                                                                                                                                                                                                17-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-DEC-2002.
                                                                                                                                                                                                                   AAE35708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric
                                                                                                                                                      RESULT 207
                                                                                                                                                                      AAE35708
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(MICR-) MICROBIOLOGICAL RES AUTHORITY.
                                                                                                                                                                                                                                                                                             23-JUN-2000; 2000WO-GB002428
                                                                                                                                                                                                                                                                                                       99GB-00014861
                                                                                                                                                                                                                                                                                                               (UNLO ) IMPERIAL COLLEGE SCI
                                                                                                                                                                                                                                                                                                                        Sinha K;
                                                                                                                                                                                                                                            Clostridium tetani TeNT
         Shone CC;
                  WPI; 2003-167247/16.
                                                                                                                                                                                                                                                                   Clostridium tetani.
                                                                                                                                                                     Local Similarity
les 21; Conserv
                                                                                                                                                         Sequence 1212 AA;
                                                                                                                                                                                                                                                                                                                        Fairweather NF,
                                                                                                                                                                                                                                                                            WO200100839-A1.
                                                                                                                                                                                                                                                                                                       25-JUN-1999;
                                                                                                                                                                                                                                    02-APR-2001
                                                                                                                                                                                                                                                                                     04-JAN-2001
         Sutton JM,
                                                                                                                                                                                                                           AAB61169;
                                                                                                                                                                 Query Match
                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                         RESULT 208
                                                                                                                                                                                                              AAB61169
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The invention relates to a conjugate comprising an injected bacterial effector protein and a carrier that targets the effector protein to a target call. Pharamaceutical composition of the invention is useful for a carget call. Pharamaceutical composition of the invention is useful for a preventing and reversing damage to calls; killing calls; promoting or inhibiting the growth of calls, apoptosis, release of an inflammatory compliating the growth of calls and treating intracellular infection and regulating nitric oxide release from calls. The invention is useful in the manufacture of a medicament for treating intracellular call, for intracellular infection, for interfering with intracellular call, for intracellular infection of call-surface markers and for trafficking, for modulating expression of call-surface markers and for trafficking secretion from calls. The invention is also useful for treating prion disease, Alzheimer disease and wide range of disorders including muscle spasms such as blephorospasm, torticolis and compliance of the present sequence is a fusion construct comprising Corynebacterium diphtheriae diphtheria toxin translocation domain (DipT-HN domain), clostridium tetani tetanus neurotoxin binding chancated invasion cene D protein. This sequence is used in the
Conjugate for modulating cell survival and cell growth, modulating release of inflammatory mediator from cells, comprises injected bacterial effector protein and a carrier that targets the protein to target cell.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   truncated invasion gene D protein, SigD. This sequence is used in the exemplification of the invention
                                                                                                                                                                                                                                                               Example 12; Page 87-92; 130pp; English
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Gaps

; 0

Indels

Length 1315;

Query Match
100.0%; Score 112; DB 4;
Best Local Similarity 100.0%; Pred. No. 8.7e-10;
Matches 21; Conservative 0; Mismatches 0;

Sequence 1315 AA;

셤

8

The present sequence is given in a specification relating to a novel polypeptide comprising tetanus toxin (TeNT) fragment C or its immunogenic fragment, containing a mutation in a loop region. The mutation results in a reduction in the binding of TeNT fragment C or its immunogenic fragment to gangliosides and primary motoneurones, and/or a reduction in the ability of TeNT fragment C or its immunogenic fragment to undergo retrograde transport. The polypeptide is useful for treating, preventing and reducing the susceptibility to Clostridium tetani infection in a mid reducing the susceptibility to clostridium tetani infection in a within TeNT polypeptides. Antibody produced against the polypeptide is also useful for treating Clostridium tetani infection

New polypeptide, useful for treating infections of Clostridium tetani, comprises tetanus toxin fragment with a mutation in a loop region,.

Disclosure; Page 39; 43pp; English

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0
                                        Gaps
                                        .;
0
100.0%; Score 112; DB 6; Length 1212; 100.0%; Pred. No. 8e-10; ive 0; Mismatches 0; Indels 0
                                                                                              842 FNNFTVSFWLRVPKVSASHLE 862
                                                                   1 FNNFTVSFWLRVPKVSASHLE 21
                                  Conservative
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exocytosis;

single chain polypeptide; clostridial neurotoxin light chain; clostridial neurotoxin heavy chain; Clostridium; neurotoxin; exocy antibacterial; vaccine; toxin assay; clostridial toxin; detection;

botulinum; tetanus. Clostridium tetani.

WO2004024909-A2

25-MAR-2004.

Clostridial neurotoxin amino acid sequence SEQ ID NO:141.

(first entry)

17-JUN-2004

ADL90423;

ADL90423 standard; protein; 1315 AA

RESULT 209

ADL90423

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Clostridium tetani; TeNT; tetanus toxin; antibacterial; vaccine;
AAB61169 standard; protein; 1315 AA
                                                                                                                                                                                                                                                   TeNT fragment C; infection.
                                                                                                            (first entry)
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New single chain polypeptides comprising clostridial neurotoxin light and heavy chains, useful as positive controls for toxin assays, or for developing vaccines against clostridial toxin. of The present invention describes a single chain polypeptide comprising clostridial neurotoxin light and heavy chains. The single chain polypeptide comprises 2 domains: the first domain is a clostridial neurotoxin light chain, or its fragment or variant, which is capable cleaving one or more vesicle or plasma membrane associated proteins Disclosure; SEQ ID NO 141; 588pp; English. WPI; 2004-270039/25. N-PSDB; ADL90422.

TECHNOLOGY & MED.

WPI; 2001-123014/13.

Stancombe P;

Marks P, Sutton MJ,

Chaddock J,

Foster KA,

Shone CC, Wayne J;

(HEAL-) HEALTH PROTECTION AGENCY.

12-SEP-2003; 2003WO-GB003824, 12-SEP-2002; 2002US-00241596.

c heavy chain H-N portion, or its fragment or variant, which is capable of translocating the polypeptide into a cell and/or increasing the solubility of the polypeptide compared to the solubility of the first domain on its own. The second domain lacks a functional C-terminal part of a clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors that are the natural cell surface receptors that are the natural cell surface receptors that are the natural cell surface receptors to which native clostridial neurotoxin heavy chain, designated H-C, which renders the natural cell surface receptors that are the natural cell surface receptors to which native clostridial neurotoxin cell chain polypeptide described above. The single chain polypeptide described above. The single chain polypeptides can be used as positive controls for toxin assays, as reagent components for the synthesis of therapeutic molecules, or for developing vaccines against clostridial toxin. The polypeptides are also useful as non-toxic standards for the assessment and development of in vitro assays for detection of functional botulinum or tetanus neurotoxins in foodstuffs or environmental samples. The present sequence is used in the exemplification of the present invention. essential to exocytosis; the second domain is a clostridial neurotoxin 8X8888888888888888888888888888888

Sequence 1315 AA;

Gaps ö 100.0%; Score 112; DB 8; Length 1315; 100.0%; Pred. No. 8.7e-10; 0; Indels Mismatches . 21; Conservative Local Similarity Query Match Best Loc Matches

ò 요 RESULT 210

AAB85697 standard; protein; 1807 AA AAB85697

AAB85697;

29-OCT-2001 (first entry)

Recombinant protein ViVac1p

Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVacl.

Plasmodium vivax. Synthetic.

WO200155181-A2.

02-AUG-2001

29-JAN-2001; 2001WO-US002937.

31-JAN-2000; 2000US-0179213P.

(USSH) US DEPT HEALTH & HUMAN SERVICES.

Xiao L, Zhou Z; Lal AA,

WPI; 2001-514557/56. N-PSDB; AAH47058.

New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial infection.

Claim 5; Page 39-45; 59pp; English.

The invention relates to recombinant multivalent proteins (I) that stimulate an immune response to Plasmodium vivax. (I) comprises antigenic determinants, fragments or conservative substitutions, derived from more than one stage in a life cycle of a Plasmodium vivax parasite. (I) is useful as a vaccine for stimulating an immune response, specifically a

protective immune response that confers increased resistance to infection by Plasmodium parasites, such as P. vivax. (1) is especially useful in the treatment, prevention and reduction of malarial infection, as research or diagnostic reagents for the detection of Plasmodium species in a biological sample, and for conferring immunity against multiple stages of the malarial parasite. The antibodies produced are useful for the detection or measurement of antigenic epitopes derived from one more stages in a life cycle of a parasite, particularly P. vivax. The waccine comprising the recombinant proteins, is cost-effective, health-promoting intervention for controlling, preventing or treating the incidence of malaria. The present sequence represents the amino acid sequence of the recombinant protein Vivaclp, a multivalent and multistage vaccine against P. vivax

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Sequence 1807 AA;

Gaps ö Length 1807; Indels 100.0%; Score 112; DB 4; 100.0%; Pred. No. 1.3e-09; 11ve 0; Mismatches 0; Conservative Query Match Best Local Similarity

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1 FNNFTVSFWLRVPKVSASHLE 21

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RESULT 211 AAB85698

AAB85698 standard; protein; 2028 AA.

AAB85698;

(first entry) 29-OCT-2001 Recombinant protein ViVac2p.

Multivalent protein; immune response; Plasmodium vivax; parasite; protozoacide; vaccine; malaria; recombinant; ViVac2.

Synthetic. Plasmodium vivax.

WO200155181-A2.

02-AUG-2001.

29-JAN-2001; 2001WO-US002937.

31-JAN-2000; 2000US-0179213P.

(USSH) US DEPT HEALTH & HUMAN SERVICES.

Lal AA, Xiao L, Zhou Z;

WPI; 2001-514557/56. N-PSDB; AAH47055.

New recombinant multivalent protein comprising antigenic determinants derived from more than one stage in a life cycle of Plasmodium vivax, useful as a vaccine for treating, preventing and reducing malarial infection.

Claim 5; Page 48-55; 59pp; English.

The invention relates to recombinant multivalent proteins (1) that stimulate an immune response to Plasmodium vivax. (1) comprises antigenic determinants, fragments or conservative substitutions, derived from more than one stage in a life cycle of a Plasmodium vivax parasite. (1) is useful as a vaccine for stimulating an immune response, specifically a protective immune response that confers increased resistance to infection by plasmodium parasites, such as P. vivax. (1) is especially useful in the treatment, prevention and reduction of malarial infection, as research or diagnostic reagents for the detection of Plasmodium species in a biological sample, and for conferring immunity against multiple

stages of the malarial parasite. The antibodies produced are useful for the detection or measurement of antigenic epitopes derived from one or more stages in a life cycle of a parasite, particularly P. vivax. The vaccine comprising the recombinant proteins, is cost-effective, health-promoting intervention for controlling, preventing or treating the health-incidence of malaria. The present sequence represents the recombinant protein. Vivac2P, a milkivalent and multistage vaccine against P. vivax

Sequence 2028 AA;

0; Query Match, 100.0%; Score 112; DB 4; Length 2028; Best Local Similarity 100.0%; Pred. No. 1.4e-09; Matches 21; Conservative 0; Mismatches 0; Indels 0;

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Gaps

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Search completed: January 26, 2005, 07:08:42 Job time: 134.667 secs

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